

Spotlight now turns on 'the English system'

The William Tyndale inquiry which set out five weeks ago to find out what went wrong in one small London school has become a national examination of the functioning and problems of primary education. It is now likely to take at least four months and will cost the IEA more than £100,000.

Expert witnesses have been questioned for days on end about methods of teaching and testing, on the merits of separate remedial teaching, on the organization of classwork and the teaching day. Conflicting views on the major current issues of educational philosophy—such as the role of structure and the degree of choice which should be allowed to young children—are being debated at length.

And the inquiry's declared purpose of examining the relationships between the staff and the managers of the school has ballooned into a minute investigation of the relationships between the teachers, administrators and politicians in the IEA and by extension within the English educational system.

In the past few days it has become clear that rivalries between Labour Party groups in the IEA and in inner London boroughs and political conflicts within the National Union

of Teachers, are all to be displayed in detail.

The inquiry has already explored the limitations of an education authority's power in relation both to its teachers and to managing bodies. Senior members of the inspectorate have explained that they have no power to coerce a head who ignores their advice and "support" or to enforce their own view of objectives and standards.

Last week Mr Harvey Hinds, chairman of the IEA schools sub-committee, admitted that the authority had no formal power beyond the "ultimate step" of instructing the inspectorate to carry out a full inspection. If there were no grounds for taking disciplinary action against the head for incompetence, the authority could not prevent him going his own way—unless it chose, as in the case of Rivinghill, to close the school.

Summary dismissed, he told Mr Robin Auld, Q.C., the chairman, was virtually impossible.

"That is the English system. I would not wish to see it changed with what every teacher at 11 a.m. on a Tuesday being decided by the secretary of state in York Road" (Elizabeth House, the headquarters of the Department of Education and Science, is opposite London's Conny Hall in York Road, Waterloo).

In reply to a series of questions from Mr Auld, Mr Hinds made it plain that there was even less than an authority could do if a body of managers chose to persist in a course which was damaging to a school. The managers were appointed for the whole of an electoral period and could not be removed so long as they continued to attend meetings. There was no possibility of bringing managers within the scope of the disciplinary code as it applied to heads since there were no sanctions which the authority could apply against them.

Pressed by Mr Auld, Mr Hinds said he did not feel that it was desirable that the authority should have greater powers over managing bodies. "In the English system, the attitude of the education authority is one of leaving teachers to teach and managers to manage, relying on a mutual confidence which in experience is rarely shown not to exist."

Mr Hinds—using a phrase he had employed in his evidence to describe his hopes that the problems at William Tyndale would be solved amicably—said that he preferred to rely "on groups of adults behaving in a fair and civilized manner in accordance with their consciences."

The majority of colleges show recruitment figures between 10 and 20. Figures for physics and chemistry, which are not taught at as many colleges, are generally worse than mathematics.

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The official returns are part of a document which shows the recruitment to specialist subjects in education colleges. It has been circulated with details of a revised DES circular on the rationalization of departments in the colleges. The Times Higher Education Supplement.

Rejection of four-year BED honours degree courses by Oxford University was described this week as a "sad day for testing" by Mr D. W. Crompton, principal of Westminster College, Oxford.

A postal ballot of the university congregation produced 329 for the degree and 648 against. Three colleges of education expected the university to validate the B Ed.

Mr Crompton said the rejection would almost certainly contribute to the decline in value of the B Ed degree as a national qualification.

The colleges could now apply to the Council for National Academic Awards for approval of degree courses, but Mr Crompton said he would "wait and see" before taking any further action.

Traditionally we have always paid the increase. The education committee took the decision on advice that to pay the increase now would preempt a decision on the total number of part-timers the authority employ next year. I think it makes sense to have a larger number of part-timers on a smaller pay increase, rather than the other way round.

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WILLIAM TYNDALE SCHOOL

London inquiry
Week five
Report by
Mark Jackson



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Fewer students specialize in maths

by David Hencke

An alarming picture of low recruitment of mathematics and science students to train the next generation of children has been disclosed in a confidential statistical report circulated by the Department of Education and Science.

The report analyses the recruitment of students to colleges of education, last year in specialist mathematics and sciences. Only five centres in England and Wales admitted more than 30 students to mathematics specialisms during their three or four-year training course.

The five centres are Manchester Polytechnic, Didsbury College of Education, Trent Polytechnic, Nottingham College of Education, and St Luke's College of Education, Exeter.

Of those, only Manchester Polytechnic and Didsbury, where more than 200 students were admitted to mathematics courses last year, do Trent Polytechnic and Exeter have large centres.

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Too much time spent on nuts and bolts

by Philip Venn

The Education Secretary should take a wider part in discussions of the curriculum, not separate witnesses on the education, arts and home office subcommittee of the Committee on Expenditure Committee on Monday.

Mr Stuart MacLure, editor of the Times Education Supplement, named more positive leadership in policy making. Ministers should discuss curriculum on areas such as social equality and the curriculum which they now ignorantly ignored.

"The job of the Secretary of State is to lead the education system beyond the point at which he has power to direct the system. This depends on the personality of the Minister and his willingness to stand his ground. He would be vulnerable to his political opponents and would get no political mileage from it."

Under the present system, the Minister spends too much time on the nuts and bolts of running his department. "The result is that the Minister is a lot of respects is not seen as a leader."

He said that he should not concentrate himself on the curriculum. "Until the worst central government exercised much more influence through codes of practice, this control was exerted in a negative way and the codes were abolished. Authority over the curriculum went to local authorities, and by default to schools."

A Minister could play a more active part by setting up an inquiry into the supply of books in schools, for example, or issue a new version of the Handbook of Suggestions for Teachers.

Asked by Mrs Janet Fookes, Conservative MP for Plymouth, Drake, if this would not be a great deal of ostensible fuss, Mr MacLure said: "Most teachers do not use the freedom they allegedly



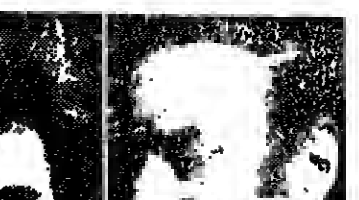
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Fundamental issues, such as whether science should be taught on a spiral basis, should not be left on one side.

Professor Vaizey said he agreed with Mr Alfred Bates, Labour MP for Bournemouth and Elmstead Port, that there was a danger that a centralized curriculum would fester on a level from one extreme to another. Even so the present system was worse than that in countries such as Sweden and France which had centralized curricula.

The committee also asked the witnesses what curriculum research, Mr MacLure suggested that an independent body, similar to the National Institute of Economic and Social Research or Chatham House,



should be set up as an alternative source of policy analysis to the DES. It would, for example, use academics and others who could look at the issues with a fresh eye.

Dr William Taylor, director of the London Institute of Education, said more people in the DES should be familiar with the difficulties of educational research. Academics would be seconded to the department, or an honorary panel of research advisers set up. At the moment the DES tended to see academics as lacking a sense of political reality. Academics thought the DES had too many intellectual philistines.

The amount of educational research in relation to the size of the service was ludicrously small, partly because so few competent researchers were being turned out by the universities.

He did not agree with Professor Vaizey that the Schools Council should be abolished. They could be reformed by setting up regional curriculum development agencies.

Earlier Mr Brian MacArthur, editor of The Times Higher Education Supplement, criticized the DES for being unnecessarily secretive about their decision making, a view shared by Mr MacLure and Professor Vaizey.

The reorganization of the colleges of education should have been debated more publicly. It would have been helpful if some of the demographic assumptions behind the closures and mergers had been spelled out. There was a case for a special committee to look at education issues as and when they arose, unlike the expenditure committee which concentrated on specific issues.

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Pay rise scrapped to save 350 jobs

by Mark Vaughan

Teacher education committee have failed to pay a 20 per cent pay rise to part-time teachers of non-vocational adult education classes in order to reduce redundancies next year.

Mr Barry Taylor, chief education officer, said if the full increase were paid to 1,000 part-timers the authority might have to sack 350 of them. A final decision will be taken later this month.

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4,000 are now out of work

Nearly 4,000 teachers were registered out of work in September, Mr Fred Mulley, the Education Secretary, said last week. The true total could be much higher; not every unemployed teacher signed on at an employment exchange.

Mr Mulley gave the figures in a written answer to the Commons. The number of nursery, primary and secondary school teachers known to be out of work in England and Wales was 3,911 compared with 2,313 a year earlier, he said.

Local authorities were employing 1,601 fewer staff than their quotas allowed. This year the quota was 430,325; but 428,724 teachers were actually employed.

Despite this there were 10,500 more full-time teachers in state schools than a year ago. In September 1974 there were 440,410 teachers, including the full-time equivalent of part-time teachers. This year the figure was 450,919.

This was consistent with the provision made in the 1975-76 rate support grant.

Fewer part-timers could get jobs, said Mr Mulley. The full-time equivalent of part-time teachers (18,532) employed in maintained schools had fallen by 1,312.

Those figures add weight to last week's calculation in the TES that 10,000 teachers will be unable to get jobs next year. Mr Fred Jarvis, general secretary of the National Union of Teachers, believes that at least 10,000 will be jobless if local authorities cut spending.

Teacher unemployment was on the agenda when the Association of County Councils met yesterday. Some local authority chiefs believe that 10,000 unemployed is too conservative. They are prepared to accept up to 20,000 as a more reliable estimate.

Between 1974 and 1975, the wages of nurses and midwives increased by 7.2 per cent, without overtime. However, teachers had some of the largest proportionate rises in the public sector.

Male schoolteachers in England and Wales had rises of 39.7 per cent, further education teachers 42.9 per cent, and female teachers 41.0 per cent.

New Earnings Survey 1975: Part B Analyses by Agreement. Department of Employment: HMSO 60p.

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Cards on the table in student power struggle

Scarborough, the modest seaside town on the east Yorkshire coast, does not know what is going to hit it tonight. Nearly 2,000 students are on their way for another National Union of Students' winter conference.

After years of bestowing their custom on the even sleeper resort of Margate on the south coast, the NUS have made a concession to their members in the regions and decided to meet "up north".

The same old, inclement weather can be expected, but there will be enough heat in the debating chamber to compensate. Bulk-purchased, portion-controlled and cost-conscious meals will be served up by the Scarborough landladies, and there will be enough rectifying and stirring of digestive juices in the political double-decker that goes on behind the scenes to stop too many delegates from suffering indigestion.

And the same appeals will be made by student leaders from all over the country for unity to defeat the capitalist, imperialist oppressors of the working classes. This time there will be some opposition.

After years of wandering in the bewilderment of student politics—where left is moderate, moderate is fascist and fascist is unable to speak—determined opposition to how the union is run is about to appear.

NUS conferences have always been signalled by announcements from minority student groups that they are about to exert an influence, saying the vote, restore the union to their senses and make them reflect the wishes of the members.

These announcements have nearly always come to nothing. Despite the student-bashing publicity which leads support to obscure moderates who crop up occasionally the few Tories, Liberals and politically uncommitted have had a hard time.

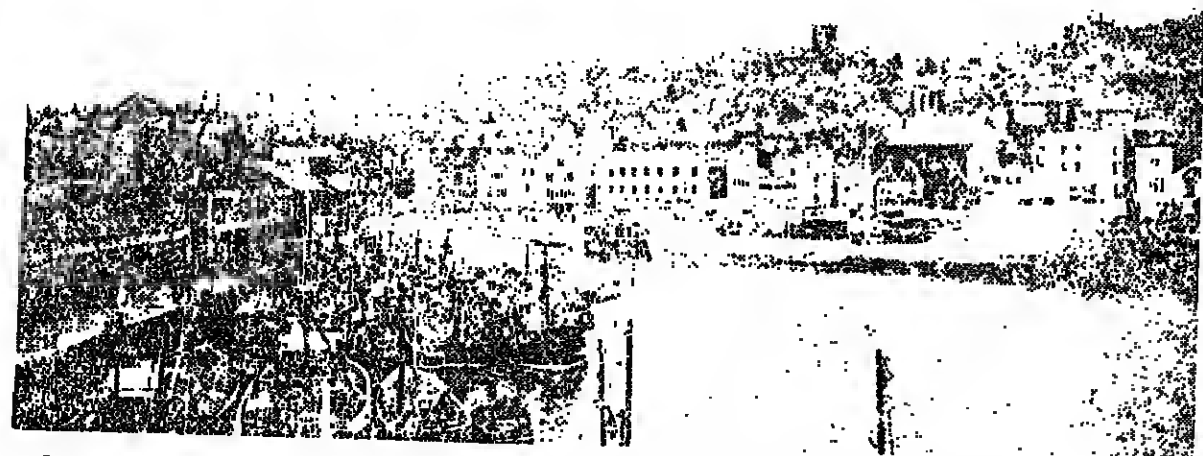
Now 19 universities, colleges and other institutions are willing to have a go at the NUS leadership. The issue is the secret ballot. "I'm sure they have little chance of persuading the conference to alter the union's constitution to allow secret elections, but the effort is being made and enough interest has been generated to make the issue number one on the agenda."

The threat of disaffiliation from the union is being used as the main reason by some of the larger university student unions in the campaign for secret elections. But Aston University, who decided last week to leave the union, have quit for different reasons.

A general meeting of Aston students voted by 893 to 332 to leave because they were dissatisfied with the NUS leadership. Although they are apparently happy how the leaders are selected and elected, they do not like the ones they have got. And, although Aston was one of the prime movers for the secret ballot, they have decided not to support it.

Who makes Aston's position even more difficult to understand is that they have just paid their £4,500 annual subscription and are members until next September.

Birmingham University students' union are demanding the secret ballot and could also withdraw from the NUS if it does not materialize. Conservative and Liberal students also support the demand. Unfortunately, the lone Liberal on the NUS executive says he intends to resign after the conference, because



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Stephen Cohen previews the NUS conference and the moves by some students to force a change in leadership.



Four of a kind—and a wild card: (left to right) Charles Clarke (Broad Left); Alan Stewart (Broad Left); Peter Ashby (Broad Left); Hugh Lanning (Independent Socialist).

he does not think the union are radical enough.

Opposition to the change in the union's electoral constitution is just as impressive. A rash of 22 amendments to the main motion have been put forward 10 of which start 'Believe all'.

The present system where the leaders are elected by delegates at the spring conference is said to be fair and democratic, since "active participation is preferable to passive and token involvement."

Mr Charles Clarke, NUS president, argues that since the union's leaders are answerable to the conference, the supreme decision-making body, they should be elected by it. A national ballot would lead to candidates not carrying out conference mandates since they would not be responsible to it.

However, the union propose minor changes in the electoral system. Candidates' manifestos should be circulated six weeks in advance to allow and instruct their delegates whom to vote for.

It is also proposed that conference delegates should be elected by a standardized ballot of all the local unions. At the moment there are various schemes. Some colleges have ballots, others rely on general meetings. And some leave it to the local president.

Mr Clarke said last week that the national union took the view that they should not interfere with the affairs of local unions. The NUS were basically a federation of individual student unions who were free to do what they wanted.

However, guidelines on how to conduct elections for delegates might be issued by the union's head office. "We would not be opposed to secret ballots for election of delegates and secret ballots for nomination of delegates," Mr Clarke said.

When all the electoral reforms have been discussed at Scarborough, students will turn to grants. They are claiming a 33 per cent increase on the current rate of £740 a year.

The new claim is for £985 as a main rate, £1,080 for students at London universities and colleges, £1,240 for students who have to stay in a foreign country for some time, and £760 if they live at home.

Scarborough students who live in hostels should get £420, where their board and lodging is provided, and

£985 if they have to pay for it themselves. Eventually, the union want all student teachers to get the main rate.

The Government's method of calculating students' grants would, the NUS say, produce a rate of £925. The method fixes grants for the year after the calculations are made and assumes that prices will rise as the year ahead at the same rate as that last finishing. This works when inflation remains stable but fails when it increases dramatically.

The union's method starts with a base rate of grant of £845. This is what they say they should get if the purchasing power of grants was restored to its 1962 value when the system was introduced.

From this £845 they adopt a form of forecasting which allows the grant to represent costs to the middle of the period they are designed to cover, instead of the beginning.

In other words, we wish to forecast the level of grant needed to maintain 1962 purchasing power in the spring of 1976, and to add on to that a 12-month inflation rate which will enable the rate to represent costs to spring 1977," says the union's memorandum to the Department of Education and Science. The rate chosen is 14 per cent.

Attempts will be made at Scarborough to increase the claim. One amendment calls for £1,150 a year; another £1,200. The amendments come respectively from the Inner London Socialist Group and the International Socialists.

The exercise is slightly academic as the 1985 claim has already been submitted, but the amendments allow the political views of the two left-wing organizations to be broadcast from the speaker's rostrum and for a row over the timing of the claim.

The extras left are having a bad time to the NUS: the IS and the IMG have only one member each on the executive. Thirteen seats are held by the Broad Left, a mixture of Communists, Labour Party members and unaffiliated socialists, while one Liberal and one Independent Socialist complete the 17-strong executive.

The Independent Socialist is Mr Hugh Lanning, the union's treasurer and number four in the hierarchy after the president, deputy, and

secretary, three posts filled by Broad Left members last week that if the Broad Left had any sense they would leave Mr Lanning alone and not attempt to oust him at the next elections in April. But the temptation of going for four ones could prove strong for this all-powerful grouping. They would then have to decide which card to pick.

Mr Charles Clarke will stand again for president. Mr Al Stewart, the current deputy, has to retire constitutionally after his two years of office. Miss Sue Shipman will put up for secretary again. So if the Broad Left do try for four of a kind they have to find a deputy president and a treasurer.

The man now displaying all the airs of grooming to equip him for one of the jobs is Mr Peter Ashby, of Warwick University and now a vice-president of the NUS in charge of services.

Mr Ashby belongs to the Broad Left and appears to hold the trump card. He will be put up for one of the jobs—the group have not yet decided which—and will almost certainly succeed.

But, in yet another of those slow political quakes, not all the Broad Left likes Mr Ashby. In sudden silence, his drive and energetic campaigning appear to be a little too spontaneous, and the older members of the Broad Left think him unreliable.

To be sure, he is entirely agreeable to the group's strict discipline, but is something of an embarrassment to more liberal members, particularly as he keeps reminding them of group policy at inconvenient times.

The informed view is that Mr Ashby will be nominated for Mr Al Stewart's seat as deputy president. The alternative is that he will be held to stand against Mr Lanning for treasurer.

Whatever happens, the Broad Left hardliners cannot lose. They will get a member as deputy president, since his election is almost guaranteed. Or they will get him as treasurer and oust Mr Lanning. Or they will get rid of Mr Ashby.

The group's managers have really only one fact to consider when they decide what to do with Mr Ashby. He has his own use to his pocket: he was president of Warwick University when one of his members, Mr Kevin Gately, died at the Red Lion Square demonstration earlier this year against the National Front. He co-wrote a book on the affair. The emotional appeal, though the circumstances are, is a powerful argument in his favour.

possible candidates who might be promoted by the Broad Left are Mr Trevor Phillips, Imperial College and vice-president in charge of education, and Mr Chris Morgan, St Andrews University.

Little hope is held out for Mr John Webster, another NUS vice-president, who came a cropper last year over a tent in Regent's Park. Mr Webster had the idea of helping the plight of London's homeless students by hiring a tent and filling it with them. It wasn't a very large tent to start with, and sadly, hardly anyone turned up. Of such things are student political careers made.

Of £760 a week rent paid by Warwick University students £240 goes to pay off the loans raised to build their hostels. This was quoted by the university council last week as an example of the unfair burden students have to shoulder.

Students have no choice but to pay the rent fixed by the universities or landlords," said a council statement. "University rents are dictated by the economic necessity of keeping the rent account in balance in accordance with the present policy of Her Majesty's Government."

Most of the residences at new universities, such as Warwick, are required to be built through loan finance instead of by capital grants from the University Grants Committee. The loans are part of their rent.

Similarly the cost of student meals not subsidised by Government funds, as is the case in other sectors of education, is another source of irritation the university can do little to alleviate.

The council say that student grants must be increased to a reasonable level and suggest that £900 a year will be an appropriate figure by next February.

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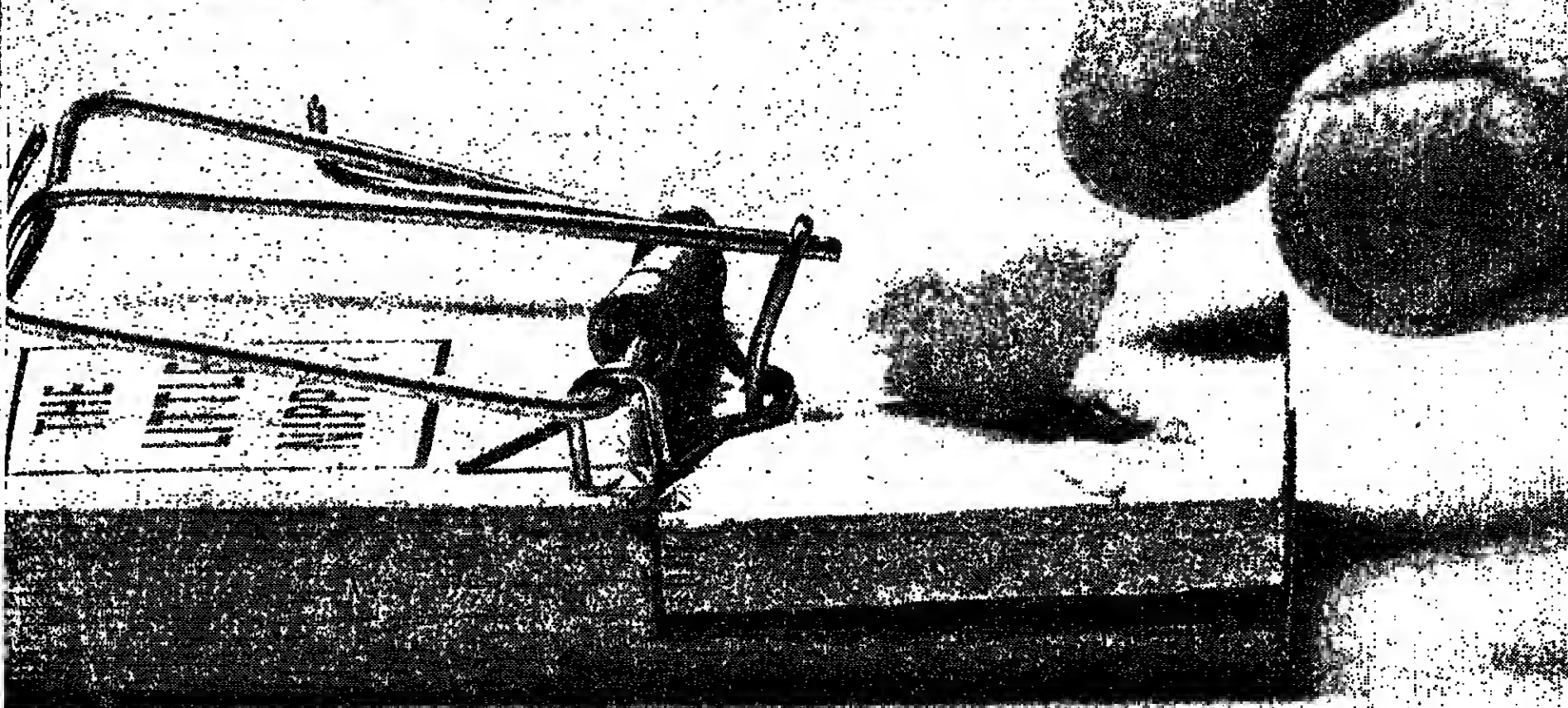
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Social services go for second-rate

by Frances Stadlen

Social services departments must put aside their dreams of national standards and organize instead for second-rate practice. The key still is rationing. If they could manage this, they could still aim for growth in achievement.

Three hundred social services directors, committee chairmen, treasurers and councillors heard this from Professor John Stewart, associate director of the Institute of Local Government Studies at Birmingham University at a social services conference in London last week. The conference was organized by the local authority associations.

Corporate planning, he said, had long seemed an attractive idea. Necessity had now made it a reality. It was time to get on with it. Strengthening things were being done in its name. Proliferating committees and endless agenda meant that the one thing policy and resources committees could never consider was policy and resources.

Many speakers pointed to the need to work out priorities and to cooperate instead of compete with other services. Mr. Fred Adams, director of education for South Glamorgan, said that education and social departments would now agree that they were not two separate services but facets of the same problem.

Dr. Brian Meredith-Davies, director of social services for Liverpool, said it was vital to take a joint approach to the under-fives. Membership of the Warnock Committee had shown him that handicapped children for part of the time, could be cared for in residential schools, which were empty for 10 weeks of the year. Treatment for just a few children called for liaison between education departments and juvenile magistrates.

Mr. William Turner, Birmingham, said training must be balanced with need. Too many people were being trained for too few jobs in pre-school nurseries. Many joint planning might avert this.

Miss Olive Stevenson, reader in applied social studies at the Department of Social and Administrative Studies at Oxford University, questioned the wisdom of the use of scarce field workers for child welfare.

Resources, she said, were increasingly being allocated to children to

the neglect of the mentally ill and the elderly. Supervising minor delinquents or truants living in areas where such behaviour was more normal than pathological, was a questionable use of their time.

Professor Maurice Kogan, professor of government and social administration at Brunel University, said that a research project, which his department was conducting with four comprehensive schools and their local social services department, had taught him that teachers did not understand the assumptions of social workers. They both constantly have to change tasks. The result was an uneconomic and frustrating use of time.

"We need to know both what our colleagues can and what they cannot do," he said. The question was whether social workers should cultivate a strong relationship with teachers or act as "a sort of licensed adversary" of the school. Ms. Elizabeth Hoodless, executive director of Community Service Volunteers, asked if the German practice of running services could be transplanted to Britain.

Mr. Alexander Lyon, Minister of State at the Home Office, said the fact that voluntary organizations represented worthy causes did not justify their use in a time of scarcity. They, too, could be badly used.

On the other hand, intelligent use of the voluntary sector could reap substantial dividends. However, proper planning and support was vital. Self-help, which was growing among minority communities, was "a most significant and encouraging development". By being preventative it often avoided the need for a statutory or professional response.

The Home Office's urban aid scheme was a limited experiment for interesting minority group projects. Local authorities should be sufficiently disposed to give aid to the most urgent and compelling projects, and should not snap it up for their own less important schemes.

Urban aid might be to be "scrapped". The Government and local authorities ought to recognize their responsibilities for coping with racial disadvantage. Urban aid should be seen simply as a measure, and an inadequate one at that.

Specialist in handicapped joins brain-drain

by Diane Spencer

Dr. Simon Haskell, one of Britain's leading authorities on the education of physically handicapped children, is leaving the country. The news that he is to take up a lectureship in Australia has caused concern in the special education world.

Mrs. Margaret Paul, education officer of the Spastics Society, said: "All his colleagues are mightily concerned that someone so important is going because of lack of resources and support. Integration is a key issue now and it is not the time to lose our greatest expert."

Dr. Haskell is to be senior lecturer at a new Institute of special education near Melbourne. The Institute will offer courses on "sensitizing" general students to the difficulties of the handicapped as well as post-graduate courses.

Dr. Haskell is excited by the prospect but he said "It is to my great regret that there is not an institute like it in this country. When he first came to the Institute of Education, he had hoped that his department could develop in this way, but this was unlikely to happen in the near future."

He has been teaching a one-year advanced course. Only 12 teachers are admitted each year, some from

abroad. Many of them become key administrators or headteachers. He fears that the course will be changed after he leaves.

There is a danger, he says, that the Institute will concentrate on research at the expense of practical courses for teachers. "I will be a great pity if teachers are excluded from universities. We cannot improve the morale of special educationists if we suggest that teachers have not got the intellectual calibre to cope with advanced work."

Dr. F. F. Morgenthaun, a child psychologist and former colleague, said Dr. Haskell was one of the few left who could strike a balance between research and practical teaching. After taking his course, teachers could judge the value of new educational theories and do useful research as well.

Dr. Haskell thinks we neglect teacher training in special education at our peril. "It is grotesque that there are no requirements for teachers in special education, except for the blind and deaf, to get extra training and qualifications. These children are presenting the most complex problems in the classroom and we must give teachers a deeper understanding of the underlying nature of learning disorders."

It is a scandal, he says, that there is "not one university college throughout the length and breadth

Smokers do do badly in class

Children who smoke do badly in school. They also understand less about the effects of smoking and what their teachers say on the subject, a conference organized by the pressure group, Action on Smoking and Health (ASH), heard this week.

Dr. Beniah Bewley, of the department of community medicine at St. Thomas' Hospital, London, said that education must be more effective to stop children from ever starting the habit.

She described a research project in Kent, in which 5,000 school children aged between 10 and 12 were asked about smoking. Seventy per cent of the boys and 25 per cent of the girls said they smoked at least one cigarette a week.

Dr. Bewley said girls tended to smoke if their mothers or sisters did. But they were less influenced by what their friends did than boys.

Boys start smoking earlier than girls, she said. There is a time-lag of two or three years before girls catch up.

Academically smokers tended to do worse than non-smokers, and more were rated "poor" by their head teachers.

Children did not smoke because they enjoyed it or found it relaxing. "To show off or look big" was the most common reason given. The girls' second reason was "to look grown up", whereas the boys said they did it "because friends smoke".

Health, disapproval by parents, "dirty habit" and "getting into trouble" were among the reasons given for not smoking. Teachers, however, were not important.

Those who smoked were less likely to say it was a danger to health. "Children in the age group 10 to 12 who are experimenting with cigarettes do not understand what is meant by lung cancer."

They knew that smoking caused lung cancer and bronchitis, but most did not understand the terms. Knowledge and beliefs were not connected with their smoking.

£4m share-out
The Department of Education and Science have announced an extra building programme of £4m to help employment in the construction industry.

Local authorities will be able to spend the money on secondary reorganization, improving fire precautions, energy-saving measures and other improvements in schools. The universities will get £250,000 of the £4m.

of Britain specializing in the advanced training of teachers for the handicapped". Until recently there was no chair in special education, a common place in most European and American universities.

Generous improvements in salaries and investment in buildings and gadgetry are a pathetic response to the needs of special education. More money should be spent on training teachers as they are vitally important in changing education.

However, he says he is very happy about leaving. He feels a concern and commitment to special education, especially of his teacher students. What he would have liked would have been to run the same sort of institute in this country as he will in Australia.

Taylor inquiry into managers and governors

Cooperation on curriculum a 'vital necessity'

School governors should be responsible for ensuring cooperation over the curriculum in associated secondary schools, the Taylor Committee said this week.

Evidence from the unit of management in the public services of Sheffield Polytechnic criticized this lack of cooperation as well as the reluctance of teachers to tackle this vital issue.

"We appreciate that the committee may come to new conclusions about the responsibility for the control of the curriculum, but we believe it should not be possible for a school to ignore or neglect the crucial need to cooperate in curriculum matters with its associated school or schools."

The unit, where students include both deputy heads, senior teachers and heads of departments from secondary schools and heads and deputy heads from primary schools, said it was a matter of considerable concern that after 30 years there was still little or no cooperation between associated schools, such as 11-14 and 14-18 comprehensive schools.

The issue was made all the more pressing and important by secondary reorganization along comprehensive lines. "Consultations in curriculum matters between primary and secondary schools should not be taken place (but generally speaking did not) under a selective system. The problem was not solved. It should be dealt with in the context of a comprehensive system."

The former county L.E.A. recognized the early stages of planning their comprehensive system as "a vital necessity of firm arrangements for consultation and cooperation between associated schools, and changed their articles of government. The new articles put the onus on the governors to ensure full cooperation over the curriculum between associated schools. The Secretary of State approved the change for both newly and voluntary schools."

He hoped that such cooperation will take place as a matter of course through teaching staffs, but he felt there must be safeguards and guarantees in such an important matter. It had received far too little attention in the past.

'Let governors handle cash'

Governing bodies should be given more control over spending, said the Schoolmasters' Association in evidence to the Education Committee. Although L.E.A.s should decide the total sums, it was not necessary for them to decide how the money was spent.

Governors should be allowed to determine priorities in spending on books, works and the "patty bakes" of extra groups of expenditure on items such as library books, catering, apparatus and equipment which he does away with.

Staffing needs could be judged more accurately at a school than at the headquarters of an L.E.A. Department of a school's points score should be determined by the governing body.

The responsibility for appointing teachers should also lie with the governing body. Most boys' and women would be persuaded to serve on governing bodies if they felt they had significant responsibilities and powers.

There was no reason why L.E.A. committees should form a majority of the school's governors. Governing bodies should be "as independent as possible of party political considerations". Parents should serve as governors but should not. "It would be a pity to allow a pupil to represent his parents even if he were judged to be capable of doing so. It would be a waste of time before leaving school to serve no more than two or three meetings."

Governors should be trained-Dr Briault

The education officer for the Inner London Education Authority, Dr. Eric Briault, wants a new code of practice drawn up to help parents, teachers and heads when they become governors.

This week, Dr. Briault said in draft evidence, which is likely to be submitted to the Taylor committee, that school government was much more complex. Teachers, parents and pupils could now become governors. There was a need for more consultation and participation by all those involved with schools.

In the ILEA area managers and governors were increasingly interested in their work in the schools and there was a continuing demand for training courses which the authority had started in 1972. "We feel that the committee should consider the whole question of training."

Dr. Briault suggests that university members on secondary school governing bodies and institute of education members on primary school bodies could well be dropped. In spite of the additional members suggested by his evidence, the ILEA felt that the majority view of the authority should prevail. "We therefore believe it desirable to have an overall political majority on managing and governing bodies."

Local education authorities should be given greater control by legislation over admission of pupils to voluntary schools. "We wish to draw the committee's particular attention to the inconsistency between co-ming and voluntary schools whereby the latter are prohibited from having any staff representation on their managing or governing bodies."

The articles of government should state that L.E.A. officers have the right to attend meetings of voluntary schools governors. Copies of articles and minutes should automatically be sent to the authority.

Research last year showed significant support for more parent and teacher members on governing and managing bodies, as well as the introduction of non-teaching staff members. The ILEA consulted every managing and governing body in their area.

He said there was a "delicate balance" in the relationship between the governing body and the ILEA and the governing body and the head and staff. "It is our view that this should be maintained much as at present and not deflected too precisely." The present arrangements had "generally worked well."

No place for pupils on boards, say heads

The National Association of Head Teachers have criticized political appointments to governing and managing bodies in their evidence.

"We feel that authorities already have adequate control first over the flow of finance and second by virtue of their responsibility, at least in county schools, for making instruments and articles of government subject, in the latter case, to approval by the Secretary of State."

"The swing should now be away from dominant local authority representation in that of the local community where we feel resources are as yet largely untapped, and revised instruments should reflect this."

The NAHT, who have 16,000 members, said representatives should be drawn from the local community. All parents should have the right to vote for parent governors in their school by postal ballot.

"We alter the decision of the Durham education authority to appoint parents to governing bodies without any reference to the parents of schools as a whole. We see this as an abuse of the principle of democratic parental involvement for what may well be party political reasons."

Another way of tightening up the system could be obligatory full

meetings of managers and governors once a term. Governors who were persistently absent, except for health or other urgent personal reasons, should be sacked.

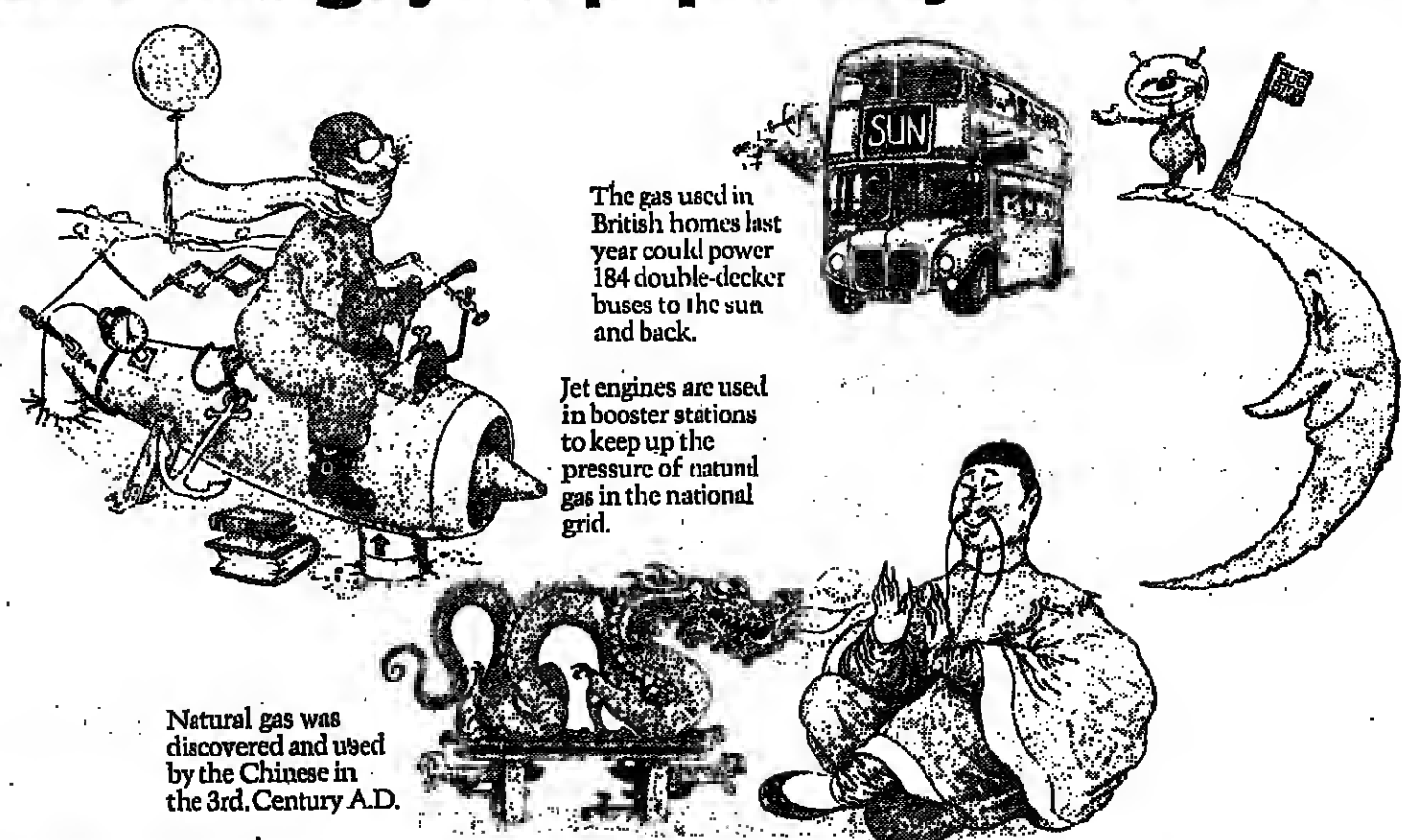
The heads felt there was no case for pupils on governing bodies. They lacked experience and "turn-over" made continuity of service difficult.

The NAHT do not want head teachers to be members of their schools' governing bodies. This might interfere with their ability to report objectively. However, heads should have the right to attend and speak at all governors' meetings.

The association also said governors should be given some training; appointments should be for three years, renewable once; no members should be allowed to serve on many governing bodies, and two members of the same family should not be allowed to sit on the same governing body; teachers should be represented in schools with five or more teachers and the number of governors should be related to the size of the school, between six and 15.

The NAHT support the straightforward working already adopted in some areas, that "the headteacher in consultation with the L.E.A. shall be responsible for the general direction of the conduct and curriculum of the school".

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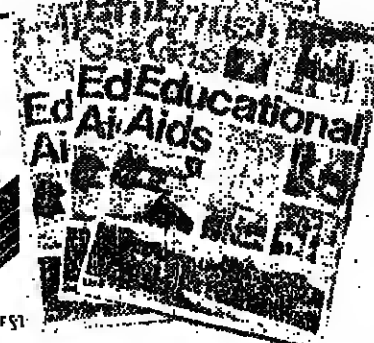
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METHOD:
Group and project work, role-play, counselling techniques and lectures.
Venues: Adult Education Centre, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.



Students learning child-care at Stoke Newington. Soon young unmarried mothers will join them.

European money draws unmarried mothers back to their studies

by Adam Hopkins
Sunday Times Education correspondent

Teenage mothers in London will soon be receiving direct help from the Common Market. Last week the EEC Commissioners in Brussels announced their support for a number of schemes to help poor families in Britain. One of them is for single-parent families in Stoke Newington, Hackney, one of the poorest areas in one of the poorest boroughs in London.

In the next two years the Common Market and the Home Office will give £500,000 for a day-care centre for small children at the Stoke Newington branch of Hackney College. The idea is that young unmarried girls will be able to leave their babies and toddlers in a crèche while carrying on with studies that would otherwise have been abandoned. They will also be able to learn about child care.

Some single mothers working to support young families will also be able to leave children at the crèche. Altogether there will be room for 26 full-time and 25 part-time children up to the age of five.

Another hope behind the scheme, evolved jointly by local mothers and the college, is to improve the methods of the local unregistered child minders.

Surveys suggest that the number of single girls with babies is particularly great in Hackney and local nurseries are heavily oversubscribed. Many young people from the north have fled to the anonymity of the borough and many unmarried mothers are West Indian.

Norma Minott, 18, and Claudette Bramwell, 19, both of West Indian origin, belong to a discussion group who meet at a Hackney youth counselling centre. They described how many young girls in the area try to break away from home—nurseries which are often very strict, particularly with first generation immigrants.

Many of these girls find themselves pregnant and alone. They are trapped, as they cannot work or study, by the babies they long to keep, in spite of bad housing and poverty.



Agreement on standards in literacy drive

by Carolyn O'Grady

Publishers and adult literacy campaigners met last week to agree on standards for publications for adult illiterates.

The meeting was arranged by the Educational Publishers Council and the reading materials panel of the Adult Literacy Resource Agency.

It was called against a background of concern among adult literacy campaigners that the adult literacy symbol, which will be used on publications which have not been specially researched and are unsuitable for these illiterates.

The standards suggested by the agency covered subjects such as readability of text, illustrations, typefaces and vocabulary.

Guidelines will be published soon to set standards for new publications aimed specifically at adult illiterates. They will also help publishers to indicate those children's books already published which could be marketed as suitable for adults with reading and writing difficulties.

Many of these publications will be published under the adult literacy symbol, but as the symbol is free from copyright, there is no control of its use.

The adult literacy symbol was launched last March when it was used to break down the communication barriers that prevent most illiterate adults knowing that any-one is interested in helping them.

The symbol has been well publicised by the BBC and the Adult Literacy Resource Agency.

Victory in sight for adult education—Ruskin head

The Government are to receive a delegation representing adult education to discuss setting up a national development council for adult education as recommended in the Russell report.

This was announced by Mr Bill Hughes, principal of Ruskin College, at a special conference called by the Russell Report Campaign Committee in London last week. He told delegates from the 30 adult education bodies which make up the campaign that he was now more optimistic.

"I think adult education has passed its Dunkirk and preparations are under way for Operation Overlord and VE Day," the economic crisis would not last for ever. It was time to set up a council to think about how adult education should develop.

There were encouraging signs in the wood: the adult literacy programme, mandatory grants for adult students at residential colleges, and the £250,000 grant to the Workers' Educational Association.

The Russell report had not been forgotten. "I believe the Department of Education and Science have taken this document as a guideline for their policy when resources become available."

A national development council would need to carry the DES assessors with them. But they should be allowed to publish their own reports, with or without DES backing.

Mr Richard Freeman of the National Extension College, disagreed. The great weakness of the Russell report, he said, was that "the dead hand of the DES is stamped all over it. It has not the inspiration of the Robbins report. It has not the inspiration of the Plowden report." It failed to arouse any enthusiasm outside adult education.

A national development council would get further in terms of doing something new if it was free of the DES. The model should be the National Consumer Council, which has not the inspiration of the Government.

Mr Neil Barnes, of the BBC, was also unhappy about linking the proposed council too closely with the DES. A substantial amount of adult education was associated with the Department of Employment or the Department of Health and Social Security.

But Mr Ted Foulser, general secretary of the Association for Adult Education, said that because so much adult education was actually under the control of local education authorities, it was essential to have DES support. This was the clear lesson of the adult literacy programme.

Soya saves £15,000

Wiltshire County Council announced this week that they will increase their use of textured soya protein instead of meat in school dinners. This conflicts with last week's Department of Education and Science report, Nutrition in Schools, which said soya should be used as well as the recommended quantities of meat.

The county based their decision on a report by the food standards committee of the Ministry of Agriculture, Fisheries and Food, who studied the use of soya in schools and hospitals last February.

This report is the most up-to-date. The DES research on soya predated the FSC's study, but was held up for more than six months.

The FSC said soya bean must be fortified with extra nutrients if it was used as a meat substitute in school meals. Iron, vitamins and amino acids normally found in meat, but not in soya, should be added. Even then soya products should only be used to replace 10 per cent of the meat averaged over a period of time. The DES recommendation referred only to unfortified products.

Wiltshire have been substituting soya for 20 per cent of the meat in cottage pies, curries, hamburgers and "beef" loaf since June. They restricted its use to one meal a month at first, for a saving of £5,000 a year.

The L.E.A. plan to adopt the FSC's recommendation on the permissible quantities of soya substitute. This, they say, will save £15,000 a year. They are not, however, following the recommendations on quality. No extra nutrients will be added.

Mr John Biggs, the county catering officer, said they were reconsidering which product to use. "At the moment only one is fortified and that is so pricey as to make it hardly worth using at all."

The recommendations of the two committees are simply for the guidance of local authorities. They do not have the force of law.

Fight back for fair play

A national campaign to defend the right of children to play in spite of cuts in public spending was announced at the annual meeting in London last week of Play for Children, the national coordinating organization.

The organization, whose members include the National Playing Fields Association, Make Children Happy, Inter-Action, the London Adventure Playground Association and the Pre-School Playgroups Association, have completed their first full year with the help of a grant from the Home Office voluntary services unit.



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Each cassette has an automatic stop at the end of the recording time. But better still, every BASF recorder can monitor its own recording level automatically, to pick up all levels of sound.

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Handwritten text: "Joh 21 10 13 16"

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- Applications to: Admissions Section (E.D.), City of Birmingham Polytechnic, Corporation Street, Birmingham B4 7DX. Telephone enquiries: Weelbourn Road, Edgbaston, 021-454 5106.

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Full details and application forms may be obtained from the Chief Administrative Officer, College of Education, Sorapton, Leicester LE7 9SU, to whom completed forms should be returned as soon as possible but certainly not later than 31st March, 1976.

'A shoulder to weep on'—that's what every new teacher needs

There are just two pilot induction schemes for new teachers running—all that is left of the 1972 White Paper plans for a national system due to be introduced this

year. STEPHEN COHEN reports on what the probationers and their tutors have learnt in Liverpool and the need to continue the experiment

When Mrs Margaret Thatcher, the then Education Secretary, published her White Paper on education three years ago there was, amid the hubbub of content, dissent and opposition, nearly unanimous approval for the short section on the induction of new teachers.

No major profession, the White Paper said, expected its new entrants to make a full contribution, however thorough their training.

Some student teachers would have responded that as: "We weren't taught how to teach at college." Being thrown in at the deep end of the classroom just after leaving college and being expected to carry on like full-time members of staff is a daunting prospect.

The White Paper recognised this and said during the probationary year teachers should receive the kind of help and support needed to make induction more effective and less daunting. They should be released for at least a fifth of their time for some training.

At work they should have a lightened timetable, equal to three quarters of a full teaching load.

Pilot schemes were to be set up. The Government aimed to introduce the system nationally during this school year.

It took two years to decide where the pilot schemes would start. Originally, five areas were considered, but three pulled out when it became clear how expensive the experiments would be. Liverpool and Northumbria were left.

There is no prospect of an induction scheme in every local authority this year or next. The cost at 1972 prices, would be about £55m, and that sort of money is not available.

Even Liverpool, who have so far been given £120 by the DES for each probationer, a total of £48,000, do not know what will happen when the experiment ends next year.

"It would be disgraceful, immoral, if Liverpool were forced to put its new teachers back on a full teaching load after the experience we have had over the past two years," said one local head.

Mr Bill Moss, head of Speke Comprehensive School, was scorned to the scheme for the first few months. The greatest benefit, he said, was the lightened teaching load for probationers and the presence of a teacher-tutor "to provide a shoulder to weep on".

Every school with probationer teachers has a tutor. Some have more than one tutor, depending on the number of new entrants. The tutors are paid £12 a month for one or two probationers, £18 for up to four, £24 for five or more.

Schools were invited to appoint their own tutors and in most cases this worked successfully. But in some smaller schools no one was

interested or there was just the head and three or four probationers on the staff.

Allowing the head to become the tutor could lead to conflict. It would be difficult for a new teacher to turn to such a person in difficulty, when it was clear that the head would assess the teacher's performance at the end of the year.

In the first year of the scheme more than half the tutors were heads or deputies. This has now been reduced.

Each probationer counts as 0.7 of a full-time teacher. Schools with a staffing quota of say 20, could in theory have 30 probationers and not exceed the quota. "It's called having three for the price of two," said Mr Moss.

Tutors are allowed two free periods for each trainee as well as their normal free time. Some tutors have found themselves with 20 free periods in a 40-period week.

"Schools have found difficulty in releasing teachers to go to the professional centres," Mr Moss said. "But it's not a question of releasing them. They should not appear on the timetable for that day."

"This has led to hours and hours of debate and acrimony when the head has said he can't release them because he has six staff off with the flu."

Another difficulty is more closely connected with teaching. "Ideally, English teachers should have at least one period a day with the class. A probationer English teacher has to miss one day a week and this breaks the continuity. But these disadvantages are overwhelmed by the advantage of the lightened teaching load."

The professional centres are in education colleges. Probationers visit once a fortnight. In the week in between they have a day off, but stay in school going through their work with the tutor.

Liverpool warned their applicants two years ago that they would be expected to take part in the scheme if they were appointed from college.

"We were worried that they might be dissuaded from coming here because they would be sent back to college. But that didn't happen at all."

Five hundred probationers attend the centres for discussions, seminars and, occasionally, lectures. Mrs Mori Mander, a teacher at Broad Green Primary School, took part in the scheme last year. She is now qualified and will be a teacher on at the centres were much more practical than the lectures or the training college.

The probationers' calls for help show where college training falls down. All except two probationers

in the first year of the scheme asked for help in teaching reading and mathematics. Other areas were science, arts and crafts, music, movement and physical education.

The lesson for the colleges must be clear: if students cannot cope with the basics of reading and mathematics, the colleges must help their teaching.

But there would still be a need for the induction scheme, say the Liverpool organizers. It would be impossible to produce the perfect teacher, no matter how good the college training. There would still be a need for probationers and their tutors.

One of the benefits of the scheme has been a "directory of skills" which lists schools in the city with special expertise and who are willing to accept groups of probationers to see why they are so good at, say, science or music or swimming or chess.

This goes back to the old-fashioned demonstration lesson and, apparently, it works. It also costs nothing, apart from travelling expenses.

The courses vary from centre to centre, but most include sessions in classroom management, observation, a panel of experienced teachers describing practical difficulties, teachers' legal obligations, the social background of children and special difficulties or children at distress.

The teacher tutor's handbook for the main difficulties faced by probationers. They vary from having to deal with wide ability groups of children with no previous experience, discipline, shyness and lack of self-confidence, managing records, preparing lessons, using visual aids and physical resources.

Personal difficulties mainly concern money, stress and fatigue, loneliness, poor accommodation, health and less leisure after school hours. During their training course the tutors are equipped to deal with all these.

One tutor said she saw herself in the front line. "I'm someone who has to put into practice all the theoretical ideas students go through before they come into the classroom."

"When I was a probationer I was given 48 unreasoned eight and nine year-olds in a Catholic school with no day's training. I was saved by the deputy head."

"The things I picked up that year from that person I still use now. If you can get to the probationers the skills necessary to help their training, they will survive."

Brief

is probe
branch of the NUT
ask all schools in the town
views on what proposed
education cuts of nearly
will mean in terms of fewer
teachers and equipment.
also want to know how many
of work teachers there are in
the area.

Learning by phone

Students at Essex University, who were given £60 to spend on guest speakers for a course in phonetics, decided to spend it on phone calls to leading experts in this field.

Uninspired pick-up

Boys and girls from the third year of a secondary school, in Essex, held a sponsored pick-up of the surrounding estate. The money raised was spent on cool vouchers for the boys.

Pentagon view

Captain Grace Hopper, of the Pentagon, is to speak on the technological explosion to the students of the British Computer Society at Thames Polytechnic on December 16.

Properties of glass

Local experiments will be used to demonstrate unexpected properties of glass during lectures by J. A. Frost, Reading University, at Imperial College, South Kensington, on December 16, 17 and 18.

School reports

Advantages of school reports are discussed in *School Reports and the Information for Parents* by Elaine Green, head of Queen's Mary Primary School, Fulham, London SW6 6ND. The booklet is available from Home and School Publications, 17, Jacksons Lane, Billericay, Essex CM11 1AH.

Minerals exhibition

The ABC of Minerals exhibition is running at Merseyside Country Club until April 4.

Appeal for books

Medley's College, Lancaster, are appealing for out-of-print books on health and leisure after school hours for a new course which they have started as part of their BED programme.

Prizewinning idea

Bill Stedman, of Clarendon College, Nottingham, won first prize in the Catering Research Institute's competition for the best idea in catering education. He devised a system to ensure that a set of recipes would cover all the commodities, processes and methods needed by a student.

TECH Dip

A new programme of study to be awarded for an award of the Technical Education Council is an evening course in land surveying at the City of London Polytechnic. The course is a full-time course with a TEC Higher Diploma.

Tower reopens

The Woody Tower is again open to the public. A booklet *HM Tower of London Educational Visits and Trips* has been produced for teachers and is available from the Education Officer, The Armouries, Tower of London EC3.

Go to music

The *Millington House Suite*, a piece for brass bands, has been composed for the 25th anniversary of the County Council's adult education college, Millington House, in Wood, Yorkshire.

The town code

Over 1,700 children have contributed to the second edition of *Junior Roadcraft*, a booklet produced by the Greater Hill Primary School, in Wood, Yorkshire.

Arctic expedition

Local teachers from Huddersfield College are to go on an expedition to the Alaska-Canada border in 1977.

Blacks shy away from O levels

White school-leavers in Sheffield and Bradford do better in O level and CSE than blacks, and the difference is not properly explained by the language difficulties of Asians and West Indians.

This is one of the preliminary findings of a Bradford University research study, given at a Department of Employment seminar last year and now included in a book, *Entering the World of Work: Some Sociological Perspectives* by Professor Sheila Allen and Mr Christopher Smith.

The authors interviewed 368 school-leavers in Bradford and 300 in Sheffield in 1972. They found that the white leavers who tried O level or CSE had an overall average of 2.8 passes, compared with only 1.9 passes for the blacks. The performance of the whites was raised slightly by the high pass rate of the East Europeans in the two cities.

Asian and West Indian leavers were less likely to have even tried O level and CSE, and not one of the sample who started work in 1971 had done an A level course.

More than 100 of the 161 Indian and 118 of the 178 in Sheffield had done some sort of public examination. This compared with only 23 out of 93 Pakistanis in the

two cities; 24 out of 68 Indians; and 32 out of 75 West Indians.

The lack of achievement of black children was explained by minority group children transferring from education to work, revealed that white leavers got better jobs more easily than did blacks.

In November 1971 there were two black clients for every white waiting at Bradford Youth Employment Office. In Sheffield 13 per cent of West Indian boys and 25 per cent of girls were without jobs, compared with under 3 per cent of white boys and girls.

Most white leavers also got higher grade jobs, with the exception of a small number of Asian boys, who gained apprenticeships and West Indian girls, who entered nursing.

About 10 per cent of the Asians and West Indians believed that white school-leavers had an advantage, but few of them reported actual experience of discrimination.

Conversely teachers are not particularly aware of the special difficulties facing young blacks trying to get jobs, say the authors.

Without special training it is unlikely that they can do much to improve their advice they give.

Entering the World of Work: Some Sociological Perspectives. HMSO, £1.75.

Council cuts overtime to make jobs for leavers

Only 74 school leavers in the London borough of Hillingdon were employed on November 11, out of 672 unemployed on the first day of the summer holiday. But as Mr A. H. R. Calderwood, the director of education, said, "If you are one of those 74 it's not much consolation to know that the numbers in other boroughs are far higher."

Which is why the borough council held a conference of Uxbridge Technical College last Saturday, attended by teachers, employers, voluntary organizations, and councillors. The subject was next year's prospects for school leavers and how to consolidate the attack on unemployment.

Hillingdon, an affluent borough in West London, have scarcely known unemployment in the past. Last year there were 900 registered unemployed and over 2,000 vacancies. Now there are 1,800 registered unemployed and 800 vacancies.

Mr C. T. Wilkinson, of the south-east regional office of the Department of Employment, said this showed that relatively prosperous areas were now suffering as much as the rest of the country. The Department of Employment figures for Hillingdon school leavers show that unemployment is hitting the unqualified much harder than those with four or more A levels. It also varies according to area. More young people are without jobs in Uxbridge than West Drayton.

Hillingdon council have already made what is probably a unique attempt to combat unemployment among school leavers. Last August they cut overtime for council employees by 20 per cent. Half the ensuing savings of £200,000 was allocated for training and employment of school leavers. For many years they have taken 50 school leavers a year as clerks and typists. This year, 30 extra jobs were created for trainee road workers, bomb helpers and social workers, road pavers, park apprentices, and assistants in old people's homes.

Mr Carol Theodorow, Hillingdon's principal personnel officer, said training was the key to the scheme's success. "In Hillingdon, the problem is not really the numbers of unemployed because vacancies do exist. It is much more a question of making the vacancies to which is available, which is why we are spending so much money this year specifically on training."

The art of public speaking in 14 easy lessons.



Practice, Practice, practice.

Inspector Rodney Eusden is an instructor at a police training school. Amongst other things, he teaches new recruits how to give evidence in court.

"The thought of speaking in public scares most people stiff," says Rodney. "What we do here is set up things as near to real-life as possible, and then practise". As well as 'props', use is also made of closed-circuit TV — during the 14-lesson course.

Learning to cope with new things crops up again and again in police training... a true challenge of character

Learning to help

Initial training lasts ten weeks. During that time intelligence, initiative and imagination are put to the test. Recruits start to learn how to look after other people and to look after themselves. They acquire knowledge and learn how to use it.

At the end of their training they'll have some idea of what it's all about. Then they'll start to put it into practice, making a definite contribution towards society.

Where education isn't wasted

It takes a good education to deal with the kind of problems facing the police today. Problems caused by social change, the more sophisticated criminal, traffic flow.

Police training builds confidence — confidence to cope with all elements of police work. Individual ability could lead to the rank of Inspector in the late twenties and Chief Inspector a few years later.

It's a career that feeds ambition as well as social awareness.

Three ways of joining

There are three methods of entry into the police service. As a police officer from the age of 18½.

As a cadet from the age of 16.

Through the Graduate Entry Scheme.

Graduates accepted under this scheme will know before they actually join that they are considered suitable for a special accelerated promotion course at Bramshill Police College.



Spotting the lawbreaker.

For more information about life and career prospects in the police, please write to: Police Careers Officer, Home Office (Dept. AT 27) London SW1A 2AP

Name (Mr, Mrs, Miss) _____

Address _____

County _____

If you would like to discuss a police career with a member of the police service, please tick here. ☐



London schoolchildren launched War on Wool's Christmas Carol campaign in Trafalgar Square on Monday following an appeal to schools and youth clubs by MARY SCOTCHEL for funds for developing countries.

Handwritten text: "The art of public speaking in 14 easy lessons."

COURSES

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DYSLEXIA:

DIAGNOSIS and TEACHING

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The Applied Psychology Department at the above university is running an Easter course in 1976 on the phenomenon of Dyslexia. The course will focus on two aspects: first the diagnosis of a primary difficulty in acquiring written language forms; and secondly teaching techniques which can be employed for this specific learning difficulty. The course will run from Monday, 5th April, to late afternoon, Friday, 9th April. This inclusive cost will be £45 (£25 full board, £20 course). Details and provisional programme can be obtained from Michael Thompson, Language Development Research Unit, Applied Psychology Department, University of Aston in Birmingham, College House, Gosta Green, Birmingham, B4 7ET.

UNIVERSITY OF YORK

Chemistry and Chemical Education

Inservice Course for
Chemistry Teachers

SPRING TERM 1977

Applications are invited for places on the one-term residential course which can lead, through further work at school, to the MSc degree. The course is made up from units concerned with chemistry (directly related to modern school syllabuses), science curriculum development and wider aspects of science education. Teachers can choose from the available units a course that best suits their interests and needs. A limited number of bursaries which cover subsistence and travel are available.

Further details and application forms are obtainable from the Graduate Office, University of York, Heslington, York YO1 5DD.

S. MARTIN'S
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One Term Course in CERAMICS

Spring Term 1977

The course, designed for teachers serving in Primary and Secondary schools, will examine new approaches to the use of clay as a teaching medium. Previous experience in this field is not essential. The course will be under the personal direction of Barry Grogan who since 1972 has been Tutor in Ceramics for O.E.S. national courses in art.

The O.E.S. has approved the course for the purpose of secondment on salary. Further details and application forms are available from Mr. A. T. James, In-Service Co-ordinator, S. Martin's College, Lancaster, LA1 3JQ.

Science diary

by

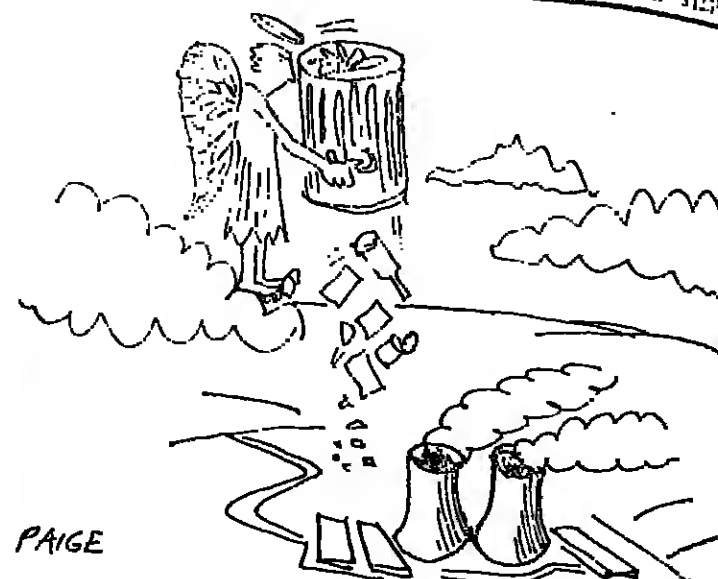
John Maddox

Clouds with
a lethal
lining

One of the most interesting of the environmental consequences of nuclear power has at last been given a grounding in experimental fact. Among the products of nuclear fission is the radioactive isotope krypton-85, which has a half-life of 10.7 years. Because krypton is an inert gas, the substantial amounts of it produced in nuclear explosions and by nuclear fuel reprocessing plants are released to the atmosphere and stay there. Potentially, krypton-85 (which disintegrates with the release of a beta particle or an electron) is a health hazard because it can increase the dose of radiation to which people's skin and lungs are exposed. Everybody seems to agree that the concentrations of krypton-85 in the atmosphere are a much smaller risk than other sources of radioactivity. The important question, still undetermined, is whether the concentration of krypton-85 may increase to such a point that it is not a significant hazard to health. It will at least be a serious nuisance in, for example, the air liquefaction industry.

The output of nuclear power increases more quickly than krypton-85 disintegrates—in other words, so the world's nuclear power stations doubles in less than 10 years—the concentration of krypton-85 will continue to increase.

Hitherto, public authorities have been shy of making detailed measurements of the atmospheric concentration of krypton-85. This is, no doubt, partly because detailed measurements would show how



PAIGE

much nuclear explosions have contributed to the atmospheric concentration of krypton-85. However, two American scientists from the Air Resources Laboratory at Silver Spring, near Washington DC, have published the results of a detailed survey of krypton-85 in the atmosphere. Writing in *Science* (November 28), Mr D. Telengas and Mr C. J. Ferber make two important points. The total amount of krypton-85 in the atmosphere in 1973 was the equivalent of 55 million curies of radioactivity, a little less than might have been expected on the basis of earlier estimates. The concentration of the isotope in the atmosphere is fairly uniform below the stratosphere (which is only to be expected). There is a small but significant decrease of concentration relative to the other lighter components of the atmosphere with increasing height within the stratosphere, a simple consequence of gravity.

All this is no surprise—the value of this survey is that it provides a tangible basis for more detailed speculation about future contamination by the gas. The same observations may provide a yardstick for telling whether the fluorocarbon chemicals used in aerosol cans are really a potential threat to the ozone layer which protects us from the sun's ultraviolet light.

By making a survey of the fluorocarbons in the stratosphere as detailed as that now carried out for krypton-85 and comparing the results, it should be possible to tell

if fluorocarbons are not destined to the lower atmosphere and, quickly they are consumed in the stratosphere, helping in the process to get rid of ozone. It is high in these issues were settled, if only because one of the silliest of environmental snipegongs.

Krypton-85 is a different kind of fish. Everyone agrees that it is a significant health hazard in the total amount in the atmosphere reaches 10,000 million curies—roughly 200 times more than present. If some of the more optimistic forecasts of the growth of the nuclear industry are fulfilled this could happen by about 1985. What then could be done about it? The technology of removing krypton-85 from the exhaust gas of nuclear reprocessing plants is relatively simple, but expensive. The snag is that the gas would have to be stored in pressurized containers for up to 10 years, simply waiting for natural radioactivity to run its course. This is why some imaginative Germans have suggested dumping radioactive krypton in the deep oceans, where the pressure might be great enough to solidify the krypton.

The real difficulty is that the scheme for limiting the release of radioactive krypton would require international agreement among operators of nuclear power stations. Knowing as we all do how difficult the mills of international diplomacy, it is not too soon to ask the people should start now on the negotiation of a treaty that may be necessary 40 or 50 years from now.

An old eccentric bites the dust

A long time ago, I used to share an office with one of the most imaginative but eccentric of all the scientists I've known—an Ulsterman called W. H. Ramsey, who died in his 30s nearly 20 years ago. One of his preoccupations was the internal structure of the planets, which led him to a variety of intriguing speculations.

Distilling the notion that the outer core of the earth is an alloy of iron with a little nickel, for example, he spent a lot of time trying to convince us all that it is really a high-pressure form of the rock olivine, made liquid and electrically conducting by high pressure. Similarly, he suggested that the core of Saturn was hydrogen. For Uranus and Neptune he advocated the presence of a metallic form of ammonium, which

would, as he saw it, be formed at high pressures by the combination of hydrogen and ammonia.

Now, alas, it looks as if Ramsey underestimated the difficulty of forming metallic ammonium, at least in some arguments due to Dr D. J. Stevenson of Cornell University (*Nature*, November 28) are to be believed.

The essence of Ramsey's argument was that hydrogen and ammonia molecules should rearrange themselves under high pressure to give ammonium ions (simply ammonium molecules in which a proton is added) embedded in a sea of electrons, functioning exactly like the sea of electrons in a normal metal. The material so formed would be a density a little less than that of water. Ramsey's guess was that this exotic material should exist in pressures of 100,000 atmospheres (roughly 1,000 tons a square inch) or less, chiefly because of the economic advantages of the electron sea. This makes it a candidate for the constitution of planets such as Neptune and Uranus.

What Dr Stevenson has done is to use experimental information about the behaviour of hydrogen at high pressures to argue that metallic ammonium would be formed only in pressures at least 10 times greater than those between 20 years ago. His argument is convincing, but I shall be disappointed if nobody sponsors the defence of what still seems to me the newest ways of explaining why even the outer planets of the solar system appear to have the metallic materials necessary to account for the existence of magnetic fields.

People

Miss Mary Hamilton, headmistress of Sydenham High School for Girls (Public Day School Trust School), has been elected to succeed Miss J. D. Baker as president of the Girls' Schools Association. She became vice-president when the Association of Heads of Girls' Boarding Schools and the Association of Independent and Direct Grant Schools amalgamated to form the Girls' Schools Association in 1973.

Miss Margaret Clark has been appointed director of the new Institute of Nursing Studies at Hull University. She was seconded from Surrey University to the Department of Health and Social Security in 1973. Mr Geoffrey A. Richardson, senior

tutor, Ilkley College of Education, has been appointed principal of Queen's College, Glasgow (formerly the College of Domestic Science) to succeed Miss Julian M. Calder who retires on August 31, 1976.

The Reverend Mark Williamson, assistant chaplain at Clifton College, Bristol, for the past four years, in January becomes county advisory teacher and diocesan field officer (schools), a new joint appointment by Avon County and the Bristol Diocese.

Mr Gareth Miles, head of the English department at Ysgol Dyffryn Nantlle, Pen-y-bont, Gwynedd, has been appointed national organizer by the National Association of the Teachers of Wales.

Appointments

Schools

Mr Martin Maclellan, acting master of Halesbury, to be head of Cranford School, Wimborne, Dorset. Miss Valerie Hollis, acting head of

Swinfield Junior School, Walsworth, to be head of John Dabie Primary School, Battersea, London.

Universities

Dr Norman G. Wright, senior lecturer in the department of anatomy pathology in Glasgow University veterinary school, to the university's new chair of veterinary anatomy.

Dr John Gilbert, reader in pharmacology at Aberdeen University, to the new chair of pharmacology in the department of pharmacy at Heriot-Watt University.

Mr Alfred Cusack, reader in surgery at Liverpool University, to the chair of surgery in Queen's University.

Mr C. D. Foster to have the title of professor of urban studies and economics in respect of his post at the London School of Economics and Political Science.

Dr W. J. Scopes to have the title of professor of paediatrics in respect of his post at St Thomas's Hospital Medical School, London.

Schools Prom

Music from the Schools Prom

The Times Educational Supplement is producing a long playing record album of the first ever Schools Prom. The album contains two records and will be available before Christmas.

Featured on the album will be music—recorded live during the performance at

The Royal Albert Hall—

by The High Wycombe Music Centre Concert Band,
St Anne's Chamber Ensemble, Southampton,
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Woking County Grammar Schools for Girls Orchestra,
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Kingsdale School Dance Band, London,
The Darlington Youth Big Band,
The Colchester Accordion Orchestra,
Itchen Sixth Form College Wind Quintet, Southampton,
The Brighton Youth Orchestra,
The Pro Corda String Orchestra, Weybridge
and the Teesside Youth Orchestra.

The double record album is available only from The Times Educational Supplement at £3.75 which includes postage and packing. To receive your album(s) please complete and send in one of the coupons below. We have provided extra coupons for other readers of this copy of The Times Educational Supplement.

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Handwritten note: "J. H. C. 1.1.76"

TE8

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LETTERS

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 101 Chesham Road,
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 Wokingham, Wokingham, Wokingham.

ion Secretary.
 Joint Council of Linguists
 Association.

socialists, who are not

JOHN PEARCE,
Brooks Croft,
Great Chestersford,
Saffron Walden, Essex.

should be as short as possible
of the paper only. The editor
reserves the right to cut or amend
them if necessary.

lower calorie value on request from the child's doctor? Many parents, I know, try to help their children shed their excess pounds, only to be defeated by plates loaded with carbohydrate at dinner time.

f B. M. ROBERTS,
n Upper Friass Schmol
: Bangor.

For information on membership and for copies of the book write to:

The Mathematical Association
250 London Road, Leicester, LE2 3NE

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Sport



Karen Bridge: three titles in a row.

Karen holds on to title

Karen Bridge, of Wallington High School, Surrey, and Andy Goode, of Monks Walk Comprehensive, Welwyn Garden City, were the outstanding players at the English schools under-16 badminton championships in Derby at the weekend.

Miss Bridge retained her singles title with an easy 11-3, 11-0 win over Toni Bass (Essex). Victor and vanquished than combined to beat Lesley Bunday (Regents Park School, Southampton) and Anna Chigello (Worcester) 15-8, 15-11 in the girls' doubles.

There was a third title for Miss Bridge when she teamed up with Goode for a 15-6, 15-9 mixed doubles victory over Chris Petherstone (Henry Cavendish School, Derby) and Rosalind Wardle, also of Derby.

Goode had no difficulty in winning his singles final 15-2, 15-3

against Peter Whitehead, whom he had also beaten ten months ago in the all-England under-15 final. They paired up in the boys' doubles but lost a rousing and close match 6-15, 15-9, 18-17 to the local pair from Henry Cavendish School, Petherstone and Darrell Roehuck.

The English Schools Badminton Association officials were so pleased with the arrangements in Derby that the event is to return there next year and maybe for some time in the future.

Tomorrow and Sunday it will be the turn of the under-14s in the first championships arranged for this age group. Nominated by their local associations 128 boys and girls will compete at Stoke Mandeville Hospital.

Despite their tender years they will play on full-size courts over nets of regulation height.

Young gymnasts beat Dutch invaders

by Asif Khan

An English Schools Gymnastics Association side beat a team of young gymnasts from Holland by 187.1 points to 180.9 in Ash Green School, Exhall, near Bedworth, Warwickshire, last week.

Six boys, all under 16, represented each side in the full six Olympic pieces of apparatus—floor, pommel horse, vault, rings, and parallel and high bars.

Martyn Ellis, aged 15, of Rokely School, Sturford, East London, came first with 42.15 points, followed by Romie Lambour, 13, of Hilland (41.06), and Christopher Smith, 15, of Springhead School for Boys, Northfleet, Kent (37.05).

Mr Reg Perry, head of physical education at Ash Green and a former member of the EPGA executive, who organized the match, said: "The Dutch boys showed a great improvement over their performance three years ago, when they lost by 30 points. There has been a narrowing of the gap and a marked improvement on both sides."

This was the third time the two countries have met at the under-16 level. Their first encounter was also at Ash Green School in 1972.

During their three-day visit, the tourists stayed with local families. Officials in the Dutch squad were presented with the bearing the Nuneaton Borough Council crest, and the boys received sports bags bought out of a £50 hospitality grant given by the council. Bedworth police gave a reception in their honour.

3,000 boys enter for the 'Big Four' golf tournament

Saturation point in schools' competitive golf is still well beyond the horizon. The number of entries for the Aer Lingus team tournament continues to increase.

Next year's competition will have at least 715 teams, and the organizers, the Golf Foundation, are still awaiting last-minute entries.

Last year there were 572 teams and this year before 420. The Golf Foundation are, of course, pleased with this 25 per cent increase, and even more pleased that 228 schools are taking part for the first time.

All this means that some 3,000 boys will go to the tea in 40 qualifying rounds to decide who are the champion schools of England, Scotland, Wales and Ireland. This "big four" will play off over 36 holes at Portmarnock, Dublin, on May 9 for the Aer Lingus trophy.

This time, to ensure the quality of the competition, these boys in

each team of four must have handicaps of 18 or better, although the handicaps are not taken into account during competition.

The competition, which started in 1972 with 112 teams, is for boys only, but girls are not ignored by the Golf Foundation in their general work; 117 girls' schools and 646 mixed schools are among the 1,622 taking part in the foundation's coaching scheme.

To give this further impetus the foundation have produced an illustrated booklet, *So You're Taking Up Golf*, which explains equipment, technique and rules.

One disturbing feature of the foundation's work, revealed by the chairman, Mr Tom Harvey, in his annual report last month, is the decline in the golf trade. The "big four" will play off over 36 holes at Portmarnock, Dublin, on May 9 for the Aer Lingus trophy.

This time, to ensure the quality of the competition, these boys in

Dayncourt girls boost basketball side

by Stanley Levenson

Dayncourt Comprehensive School, Radcliffe-on-Trent, Nottingham, strongly represented in the under-16 squad which will represent England in this season's international matches.

Three of the team—Jackie Cheetham, Linda Gardner and Sue Green—are Dayncourt girls.



Sue Green, Jackie Cheetham and Linda Gardner.

both the coach, Mr John Jones, and the assistant coach, Mr Chris Moss, teach there. Dayncourt are reigning under-14 champion school.

The 12-strong squad was chosen after the first under-16 league tournament which was won by North, at Barking, at the end of November. The North provided the captain, Bernadette Hogg (Carmel School, Dartington) who scored 137 points, but the tournament's top scorers were Sue Green and Christine Graham (Thomas RC School, Middlesbrough) with 29 points each.

Miss Graham was also selected for the International team when other members are Blanche McClatchie (Hammersmith School, Dartington), Dale Burrell (St. Paul's School, Sheffield), Anna Stratton (Simon Balla School, Hertford), Maureen Adams (Sels School, Hertford), Lynn Fox (Great Baddow School, Chelmsford), Ruth Hoyle (Plum School, Malden), Sharon Hill (Broomfield Comprehensive, Havant, Hants, who are the under-16 champions).

24/25

Competitive sport



26

Movement notation



27/31

Books:

literature; social work;
English; politics;
history and economics texts

32/34

Resources: games;
language laboratories;

39

Talkback: staff meeting
transcript

Curing a social disease

Rob Jeffcoate looks at some of the questions raised in a new book on racial attitudes in children

the vicinity which includes Peter's home town.

These four episodes are not random hearsay. They are extracts from the results of a systematic exercise in information gathering carried out by the Schools Council project "Education for a Multiracial Society" during the past 18 months. Nor are they unrepresentative, although specific in some ways to the contexts that produced them. A host of similar episodes could be added to sketch in the outlines of children's attitudes in all multiracial societies which accord minority races in South Africa's case, of course, is a majority inferior status.

David Miller's admirable book provides a rigorous interpretative framework, as well as substantial and more scientifically authenticated evidence, for understanding how Richard, Doreen, Peter and the white nursery school children, all growing up in multiracial Britain, have come to think and feel as they do about race. More particularly it shows the clear relationship between white nursery school children's rejection of black people and Richard's denial of his own colour.

The explicit intention is to describe, from a socio-psychological standpoint, "the process by which children develop racial attitudes in societies where prejudice is widespread" and "the psychological effect of this climate of prejudice on black children".

Prejudice and discrimination are indeed widespread in Britain. This has been amply attested by Government White Papers, PEP surveys, and reports emanating from the CRC and other independent bodies. Racial prejudice is a cultural norm in our society with identifiable "historical and contemporary determinants".

It is surely the expression of unadjusted personality. Many of Peter's classmates rejected minority races and their cultures, but his essay alone betrayed what could be called "pathological symptoms". To the extent that prejudice is a "disease" it is a social one, which children begin to catch before they start infant school, and which ultimately affects us all.

The disease comes to them through the same agencies (home, community, peer group, media and school) as adult them to by Bogardus and Bruno Lasker in the late 1920s, from which Dr Miller approaches his investigation of children's racial attitudes. It is a social climate that remains almost unchanged in 50 years of continual confirmation curiously unaccountable to many, maybe to most, teachers of young children.

The early chapters of Dr Miller's book analyze prejudice's historical determinants, showing how racism came to be endemic in our society. From the analysis it is possible to discern the influence of 1,000 years of the English language, and the even older imprint of Classical and Christian tradition, behind Doreen's association of her own perceived ugliness with the colour of her skin.

What gave the British image of black people its particularly derogatory cast, however, was the need to find justification for their enslavement and for the colonization of the lands. "Justification" was provided by pseudo-scientific theories about race in the eighteenth and nineteenth centuries, which culminated in a quasi-Darwinian belief that blacks were an inferior form of the image, and of the early decades of this century, did a genuinely scientific study of racial attitudes become established.

The research evidence assembled by Dr Miller, mainly American but drawn also from Britain, Hong Kong, New Zealand and South Africa, is unanimous in finding that children of the dominant racial group in a multi-racial society become racially aware at around the age of three, and at the same time start to develop a simple pattern of preference for their own race.

Two years later they are capable of uttering elementary forms of adult rejection, and of noting the different racial and economic rules played by the different racial groups. Negative feelings intensify through the junior school years until 10 or 11, when a statement bearing all the hallmarks of fully blown racism is within the competence of a boy like Peter.

Dr Miller's main concern, however, is not so much with the development of white children's attitudes as with the black child who, faced with the same climate of prejudice, may develop a very much more ambivalent pattern of identification and preference.

Although black children, because prejudice affects them more nearly, tend, if anything, to become racially aware earlier than white children, and although early sociological studies of the American black had remarked on his tendency to adopt white society's low estimation of his race, a psychological literature on the effects of receiving prejudice was slow to accumulate. It was 1939 before Kenneth and Mamie Clark's seminal research drew attention to the extent of self-denial and identity conflict occasioned in young black children by their socialization into the norms of a racist society.

Since then a multitude of replications, using doll and picture identity and preference tests, have produced similar findings. Dr Miller's own major British replication (first summarized in *New Society* four years ago and here described in some detail) conclusively demonstrated, from a sample of English, West Indian and Asian five to eight-year-olds, that being young and black in Britain is not so dissimilar as might be expected to being young and black to the United States.

On the "ideal" identity test ("If you could be one of these two dolls, which one would you rather be?") 100 per cent of the English children, 82 per cent of the West Indians and 65 per cent of the Asians chose the white doll.

It would be simplistic to suggest (as Dr Miller certainly does not) that the total picture was of unrelieved negation—white rejection of black and black rejection of self. There were, of course, some positive variations from area to area, school to school, class to class, and from individual to individual.

Stephen, in Doreen's class, felt self-confident enough to launch his little essay with "I am black," while Glenford wrote: "I was born in the West Indies. . . My face is like my dad's and my hair. People say that I am a nice boy . . . and my hair is soft and bumpy."

Several of Peter's classmates were appreciative of Asian culture and exceeded the limits of "immigrants" in Britain, and others wrote essays in which mutually contradictory racist and democratic norms struggled for supremacy.

A variation to which Dr Miller refers is in the different reactions he had reported in Asian and West Indian children to

the experience of prejudice. To the extent he found much less difference than he expected, perhaps, as he surmises, because white society tends to reject the two groups in an indiscriminating way as "them" or "blacks" or "immigrants". Nevertheless, it does seem to be the case that a derogatory personal identity is "less easily imposed" on Asian children, whose fiercer and clearer cultural foundation acts as a protective bulwark.

In a sense this is paradoxical given the general course of the argument, for whereas white children in multiracial schools are more disparaging and hostile towards Asian than towards West Indian children (this, at least, has been my impression), and on account of just that cultural distinctiveness, it is West Indian children who are widely reported to be underachieving, and alienated from or at loggerheads with their schools.

None of this is to detract from the overall ineluctable truth that white children growing up in contemporary Britain will be predisposed to pejorative views of minority races, and black and Asian children to ambivalent attitudes to their racial selves. In the light of the proven correlation between identity conflict and anxiety, maladjustment and personality disorder, and between a positive self-image and success at school, it is reasonable for Dr Miller to argue that the major causative factor in black children's underachievement and behavioural difficulties at school is not the amalgam of supposed deficits in their home and community life often cited, but the "damaging effect" of low estate status.

To accept the implications of this analysis is to accept the need for reform in multiracial schools. Against the background of his impressions (and it is one I share) that "the black child spends the greater part of his waking hours in a place which does nothing to confirm him in an important aspect of his identity", Dr Miller argues strongly for a "bicultural" educational policy, along the lines of the model outlined by Stephen and Joan Baruz in the United States. The primary objective would be the fostering of racial pride and a positive cultural identity in black children.

White children, including those not in multiracial schools, need to be educated quite specifically for citizenship in a multi-racial society, since it will be the aggregate of the adult attitudes of the white children currently in our schools which will crucially determine the life chances of the next generation of black children.

Comparable in importance are the attitudes and expectations teachers hold about children. If prejudice is, indeed, a "social disease", it would be unrealistic to put it mildly, to imagine that it was a disease from which teachers are immune. It is to be hoped that Dr Miller's book will not only be read by practising teachers, college lecturers and advisers, but will also be the focus for discussion and decision making in staffrooms, seminars, teachers' centres and county halls.

If it does no more than scratch once and for all the absurd myth still clung to by many teachers that young children are racially oblivious and innocent, it will have struck a significant blow for the cause of multiracial education.

"Children and Race" by David Miller, Penguin 1975, was published last week. Rob Jeffcoate is a member of the Schools Council Multi-Racial Education project.

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Seeds of fitness are laid in Finnish schools

by Don Anthony

It is not surprising to find a passion for health and fitness among middle-aged and elderly people in Finland. The seeds are laid in the centralized schools curriculum for physical education—part of the reform of Finnish education which is based on the "lifelong education" philosophy.

Health and fitness clinics have mushroomed. Attached to all new gymnasia, swimming pools, and sports halls are small centres, complete with bicycle ergometers, multi-gym, weights, rowing machines, and modern treadmills. Tallomoda fitness programmes are designed for a modest fee by experts and testing procedures are available. One new Helsinki comprehensive has the lot.

There seems to be widespread agreement among the political parties that sports and recreation are natural aspects of a complete human and social service. State intervention runs parallel with voluntary sports organizations, of which there are many.

The oldest, SVUL, is this week celebrating its 75th anniversary. Among the speakers is Professor John Koss, of Loughborough University.

School and university sports organizations are aided by the Ministry of Education, which this year distributed about £20m from a state-controlled football pool. A similar sum went to arts and science pools. The pools are based on the English Football League.

A British delegation which visited Finland recently included Mr R. Palmer, deputy secretary of the



"Move for your health," say the Finns—and they do.

British Olympic Association and former secretary of the British Universities Sport Federation, Mr Peter Sebastian, general secretary of the Physical Education Association, Mr M. Backe, recreation director for the Borough of Stevenage, and ex-director of physical education at Sussex University, Mr Pat Stanton, lecturer in physical education at the University of Liverpool, and Mr R. Price of the Central Bureau of Education.

Mr James Platt, director of the Central Bureau, led the group. The bureau intend to establish an advisory panel in sports, physical education and recreation, and to accelerate the exchange of documents and people.

Efforts are to be made to arrange a joint Finnish-British physical education conference in 1977. Exchange fellowships in physical education are required for the Plans want to send a specialist to Wales to study community recreation and methods of teaching swimming. Finnish Volleyball Association have been asked to send a coach to help British groups for matches in England.

The game's not the thing

Edward Le Jeune

We do not have to be disciples of B. F. Skinner to know that behaviour is directly influenced by environment. It is not surprising, therefore, that we behave as we do, for the social milieu in which we operate is predominantly competitive. Competitiveness is not the constructive element which some would have us believe. On the contrary, to compete is to seek to destroy before being destroyed. Competition is violence, and any activity for which it provides the driving force is a violent one.

Competition is so endemic in our culture of anxiety, however, that we experience difficulty in acting effectively without its spurious stimulation. We witness the unhappy behaviour which results, yet we seem unable to link cause and effect. Thus, we readily give competitive sport a prominent place in school, laying great store by its character-building properties. All we achieve with this and other activities of a similar nature—and I do not exclude the academic side of education—is to reinforce a child's image of himself as a competing animal in a violent world, an image which it will rarely be able to change in later life.

Watching children at play offers what may be the clearest view we ever have of ourselves. If their play is cooperative, the child's response is on balance one of wholesome pleasure. If it is competitive, the balance shifts towards anxiety, and dissension. Pleasure will be reserved for the winners, and even then will be coloured by the invidious pignions of triumph.

Children placed in competitive play fall roughly into three groups. The first are individuals who reject competitive confrontation. So far as sport is concerned, they have traditionally been regarded as rather odd; somehow not quite whole. It is true that they are

often sensitive or disturbed children, but this attitude does not necessarily signal any abnormality. Superficially, their rejection may be physically clumsy, for example, they profess not to be interested in the proposed activities.

Whatever the ostensible reason, these children have one characteristic in common—they do not relish the prospect of exposure while the game proceeds, and they feel threatened by it.

The second group comprises those who start to life appears to have made their bed. They are secure, well-balanced and adaptable. They accept the competition but are not much affected by the outcome. They may be a bit full and strong but are rarely start, because they lack "competitive bite"—"killer instinct"—whichever euphemism is chosen to describe the urge to harm someone else.

The third group is the largest. These are the children whose conditioning impels them to compete but has not so far pushed them into the rejecting group. They do not appear to be the most contented of individuals, in fact the intensity of their competitive drive seems to approximate to the degree of insecurity in their position. It is this position which their start to life has given them.

From 20 years of teaching it would be easy to choose individual children whose dramatic behaviour would lend extravagant support to my case. For example, I could choose J, from whom the slightest setback brought hysterical, intelligent and nervous response. She made the decision to change from fierce competitor to rejector, and ended up with all competition because it had brought her only frustration and unhappiness. She was a rare one.

Then there was B who, when overcome by superior skill, used physical force to beat his way if faced by someone weaker than himself. If, however, his opponent was strong, he found imaginary holes in the ground which caused phantom injuries, after which he shed tears for socially acceptable reasons.

Again, there was G who, whenever he was

located on the games field, was liable to vomit uncontrollably and go through a series of violence, varying from physical attack on other children to throwing himself on the ground and writhing like an epileptic. Such children, however, form the apex of a pyramid. To obtain a more representative picture it is better, perhaps, to study the lower levels. With this in mind, I started a group of 34 boys over a period of 1 year. I do not claim that they are fully representative of primary children, but they are not hand-picked in any way.

So far as my three categories are concerned, 14 of these children fit into group one and regularly express a preference to take part in a competitive game. Two are placed in the second group: they are games readily but are not affected. A third of 18 remains for group three.

Of the 14 who reject have difficulties about combining their kit. This apart, their approach is varied. L—dour, complex, introverted—expresses dislike of all sport. When the call comes, he will be sitting tightly in his seat, his eyes fixed on a book. He has to be prodded to his position of security. Once outside, he is happy enough to practise with me, but as soon as any kind of contest is proposed he tends to "disappear". If it is insisted that he takes part, he will stand, hands in pockets, face dark, making desultory passes at the ball if it comes near him.

His mother: he must rarely have been forced to express himself openly. Head bowed on hands, he will inform the world that beneath his breath: "I hate football!"

His statement varying with the activity. One week he will ask me whether he might be allowed to go to the field instead of joining the others. Thus equipped he will burst into the open, throwing his hoop before me and running after it. He will happily repeat this activity for an entire period. Despite appearances, this is no mindless imitation, for as he plays his expression animates and he is talking imaginatively to himself "I'm hypnotising this hoop!" He

avoids all competitive activities, for although he is able to work delicately and precisely when modelling, he moves in an uncoordinated way when he is placed in an alien situation. On the sports field he knows that sooner or later this will lead to his making a mistake, he will be criticized and this will lead to a temporary emotional collapse.

V has found an answer of sorts. As soon as the introductory part of the games lesson is over, he asks to tidy the shed in which our equipment is stored. This work, meticulously done, is usually completed just as the final whistle blows.

C and S will ask for bats and balls so that they can have a knock-up. After a while they may ask to assist V. When they feel that they have helped him enough, they will ask to be allowed to dress up in the cricket gear. If forced to take part in a game, they will gradually drift away from the action and pass the time playing with grass cuttings or making daisy chains.

B, H and K will ask for big balls and permission to take them to the side of the field. Casting laughing eyes on the infant school's sundial, they will kick about languidly for a while, but soon something like a model car will make an appearance and a game more to their taste will begin. Of course, they could be persuaded or coerced into playing football or cricket, but the result would be negative.

In each case, a child is rejecting in what he hopes is an acceptable way a competitive situation designed by adults. If he is forced to take part, he will become awkward or passive and will achieve nothing beneficial. Yet every one of these children is eager and cooperative when their ability is not being measured against or used against that of other children.

There is little to be said about the second group. They are able to cope with most external conditions, adapting readily as changes occur. Their part in any sporting event is usually unobtrusive, unless they happen to be like big gentol T, who would calm any stormy match post-mortem with "Gentol, it was only a game!"

Two practising teachers here add their voices to the argument about competitive sport in schools, an issue discussed in the TES earlier this year. Edward Le Jeune suggests that sport can have a violent effect on children's behaviour, while Alan Wright sees footballing skills being obliterated by a preoccupation with aggression and success

The third group need to compete. Occasionally they may flirt with rejection, if their own form or the team's results are poor, but generally they are more than willing to accept the manifestation of their personal drives, as it may be their response to social pressures such as that, for example, which implies that rugby and masculinity are synonymous.

These children rarely forget their kit. They are the ones who are constantly asking "Are we getting games today?" as if under the chance of proving themselves might not materialize. They are so expectant, so bonyant. They chatter as they rip off their clothes in the changing room, their shrill voices advertising their meaningless plans to a largely deaf world. They are so full of high spirits when practising that it makes what follows all the more poignant.

It is true that most games begin well. The children, in their innocence, can no more conceive their own defeat than they can their mortality. Deterioration in behaviour usually accompanies a change in circumstances such as a goal. Perhaps it becomes clear that one team is falling behind. Mistakes begin to gain in significance, tempers in fray, frustration in growth, blame is apportioned. The players may be inviolable but they are not happy: facial expressions and body positions tell us that.

S, from his place in goal, will scream hysterically if play comes near him. "Where's the defence? Mark him! Get it out of the box!" If a shot goes past him, he will be found lying in foetal position with yet another "serious" injury. There will be general screaming chorus of "Not again!" followed by his strangled reply of "You wouldn't like it!"

Elsewhere E, his face registering an analogue of anxiety, exhaustion and aggression, will be dribbling himself into a corner, wanting to be rid of the ball but somehow unable to manage it. As his avenues of escape begin to close, he will yell repeatedly, "Well, help us somebody!" He will lose the ball and stand listening to the criticism, hunched, bent, hands on braced knees, breathing

in sobbing gasps and directing his frustration towards the grass.

W holds on to the ball with proprietary determination. He will go for goal no matter what the odds are. His team-mates will first ask, then hiss and finally plead for a pass, but he will not hear them. He will shoot and, more often than not, miss the target. Those importunate about him, seeking some small degree of satisfaction from the incident, will shout accusingly. "It's always the same with you!" to which W, his face sullen, will reply, "Shut your mouth." F meanwhile has lost his temper with A and kicked him.

N may be found sitting alone out by the corner flag. His head is hanging, his face red, his eyes heavy with resentment but touched by sorrow. He is a quiet, nervous boy who whines under criticism. He has probably been dismissed from his favourite position because a goal has been conceded. He now sits alone, looking away from the proceedings. Ask him what is wrong and he'll say with some difficulty, "I'm always getting the blame!"

These are minor events, classical in their mundanity. They are so much part of the competitive scene that they seem hardly worth mentioning. But take them, together with the occasional more extravagant happening, and place them against a general background of bickering, crawling, niggling, kicking, accusing, excusing dispute, and you have a picture of a small community of odds with itself. It is not the function of education to provide this sort of violent exercise.

The feelings which promote this behaviour cannot be stopped. The behaviour itself may be suppressed—why else do we have referees and linesmen—and with suppression we may imagine we are teaching self-control. If we do, we are deluding ourselves, for the feelings will continue to work and be expressed in other ways. We really cannot escape the fact that if we put children in competitive situations they will respond violently or suffer violence.

Edward Le Jeune teaches at Bullion Lane Primary School, Chester-le-Street.

Losing touch

Alan Wright

But for the example set by a few enlightened coaches and managers, the emerging pattern of our national football philosophy has been physical rather than cerebral, emotional instead of intellectual—and all that in no atmosphere which has sanctified power, peace and aggression at the expense of technique, touch and reason.

While acknowledging, regretfully, that in professional football the result is more important than the means of achieving it, I find it sad to see a similar attitude filtering down to the youth and schoolboy levels of the game. While obviously it is important to be seen to be successful in what one does, it shouldn't colour one's judgment to the degree whereby there are only two poles—success and failure—a case of black and white with nothing in between.

W. F. Roberts, the chairman of the North West Sports Council, wrote in this summer's edition of the *Sports Development Bulletin*: "The old notion that the main object and the prime interest of nations was not winning but taking part no longer applies in the school's international competitive fields. After the question 'How did they play?' 'How did they win?' 'How did they lose?' 'How did they enjoy themselves?' 'Winning these days is all-important, the name of the nation is at stake, and many ways to prepare its participants in the best possible way to beat the world'."

Sadly, it is not just the school's international competitive fields that are affected. The influence of these ideas is spreading to the youth and schoolboy levels of the game. The old notion that the main object and the prime interest of nations was not winning but taking part no longer applies in the school's international competitive fields. After the question 'How did they play?' 'How did they win?' 'How did they lose?' 'How did they enjoy themselves?' 'Winning these days is all-important, the name of the nation is at stake, and many ways to prepare its participants in the best possible way to beat the world'."

the wrong idols. The principles of soccer, assisted and protected by its laws, encourage the development of nervousness, emotion, controlled body movements, adjustments and readjustments of body positions both aerially and on the ground, or varying degrees of pace and in varying degrees of space.

All these movements are performed under some kind of competitive pressure, and almost all are concerned either with winning or keeping possession of a ball—which has loyalty only to the person capable of exercising the best control over it.

Why, then, do so many people administering and coaching young players seem to spend so little time on the development of personal skill. I don't just mean the group practices which encourage passing, shooting, accuracy, tackling efficiency and heading skill, but the imaginative use of situations where each player has a ball and is encouraged to make it his friend. He will learn to "caress it and stroke it lightly with his foot (inside and outside), sole of foot, thigh, chest and head. Having learnt to do this while on the ground, he can learn the art of aerial control, where nearly all of these movements can be performed with the body off the ground.

No artist—painter, musician, singer or sculptor achieves greatness without an infinite capacity for taking pains over his work. The same can be said of most sportsmen—tennis players, cricketers in the field, golfers, athletes, swimmers, all practice the boringly repetitive routines of their sport. Why, then, do we place so much emphasis on skill development of a personal nature in our junior football, and put so much emphasis on merely playing it? I think the reason is twofold. First, all boys want to play the game but few want to learn how to play it—really learn. I mean, all the practice which requires patience, dedication and effort. Second, far too many teachers, instructors and coaches take the

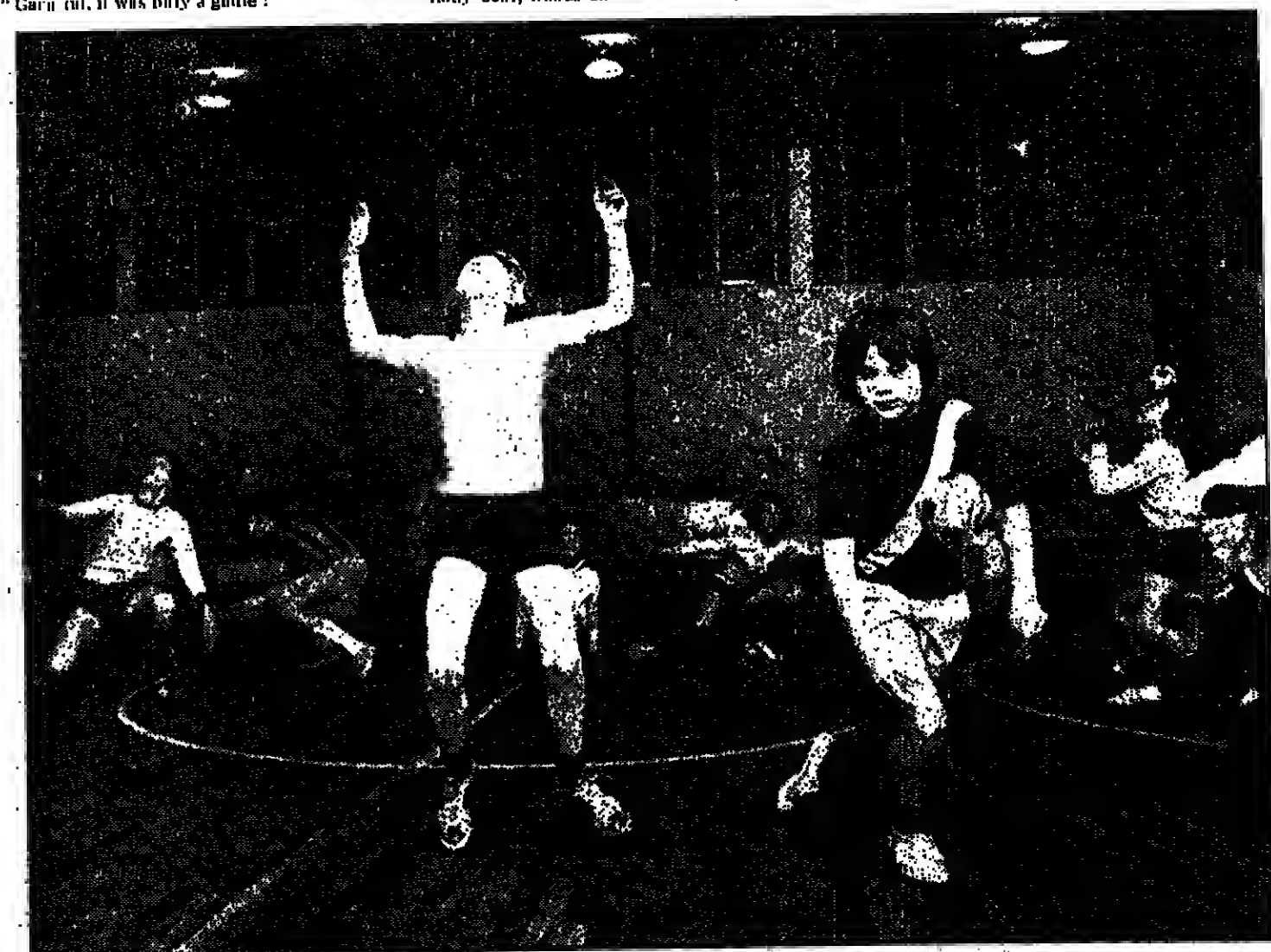
way out and referee a game rather than create a situation which requires their imagination and creativity to be stretched and tested.

The Football Association coaching schemes are an excellent work over the past 25 years in encouraging a receptive climate towards coaches in schools, but even they have overcome the built-in dogmatism of so many teachers, who find it hard to concede that their views are either wrong or out of date.

Depressionable children have to see and hear to learn, and their development is retarded accordingly. The game's future also suffers because, played at the right pace and with the right philosophy, soccer can be one of the greatest possible beauty. This beauty is stifled by the speed and intensity of uncontrolled players, who have been forced to develop technical faults as very young children which in later years are hard to eradicate.

We have two ways of restoring some of the aesthetic appeal of football and, in so doing, making people—players, administrators and spectators alike—conscious of its beauty. We should encourage more personal development of an imaginative nature in primary schools, so that children from eight to 11 years of age are encouraged to develop that skill, per se, is something worth having for. And there should be no competitive football until boys are 13 or 14 years old. Their minds and bodies aren't equipped to handle the pressures of excessive striving over and above the normal effort required for a good performance. I am positive we could improve our basic philosophy of football development within five years if we would remove competition from young, immature minds.

Alan Wright teaches football in the physical education department at Holloway School, London.



Boys at Holloway School learn to 'make the ball their friend'.

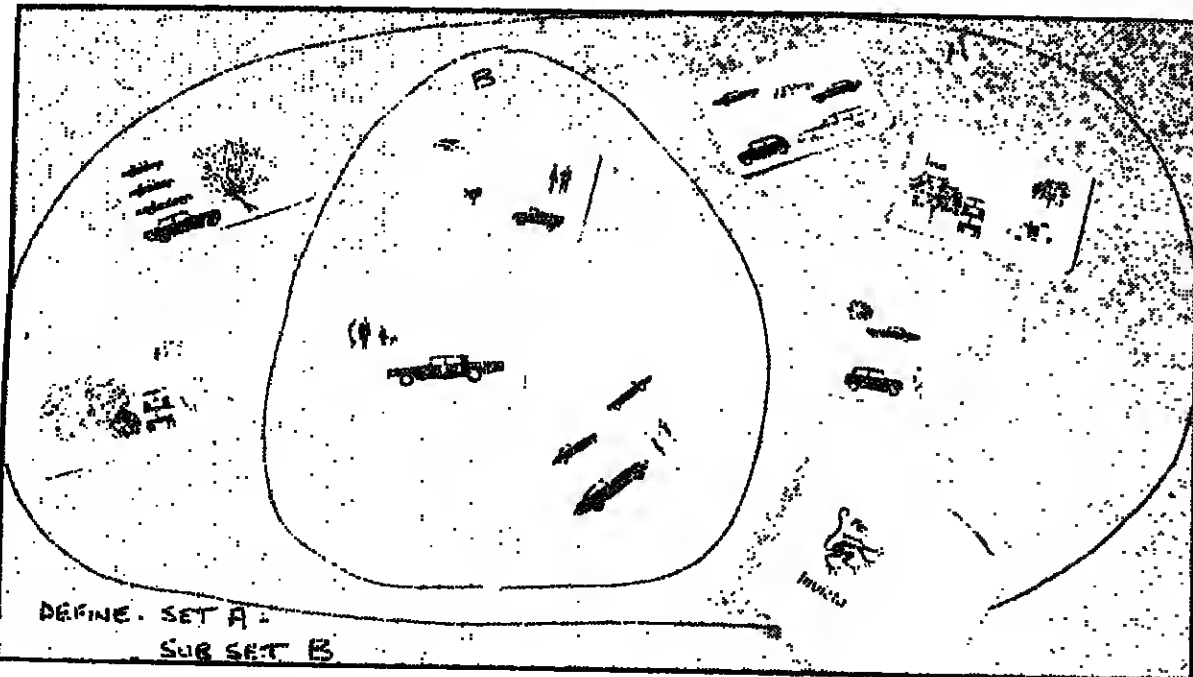
Photograph by John Pears

John Pears

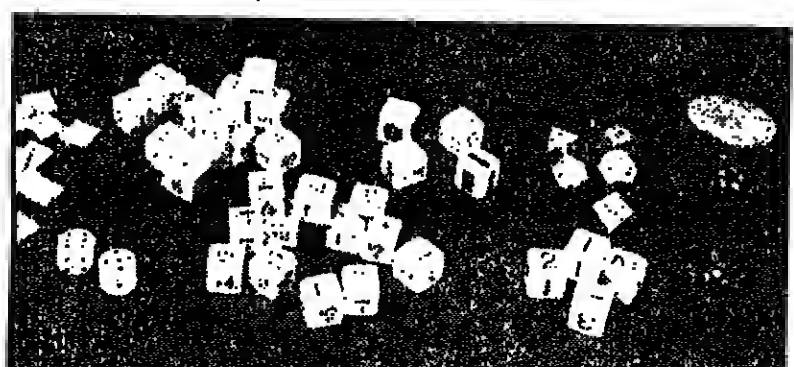
Continuing our series of articles commissioned by Chelsea College Centre for Science Education, Peter G. Dean looks at mathematical games. Next week he will discuss more advanced games

Playing the numbers game

Cateona (200). Numbers Dice Set 46p. Multi-sided dice 8p each. E. J. Arnold, Buntingford Street, Leeds LS10 1AX. Multi-base dice 50p a set. Number dice 97p a dozen. Sum dice 97p a dozen. E.S.A. Creative Learning, Phoenix, PO Box 22, Dunbar, Essex CM19 5AY. Quick Test 90p. Turning the Tables 95p. J. Ball, Brookfield Road, Chester, Cheshire. S.N.S. 20p. Card Games Set 2: Cagion, Epistol, Mind 8. £2.45. Dialecta Phantas, Dalby, Leicester LE2 4LR. Mathematical Games. By P. Epps and J. Dean. Hutchinson £8.15. 113p. Taskmaster Aids, Morris Road, Clarendon Park, Leicester LE2 6DR. Mathematics 90p. Thomas Hope, St Philip's Drive, Royma, Othman, Lancs OL2 6AG.



Above: Invicta's Epsilon game;
below left: Vector Cricket by Taskmaster Aids;
below right: some of the dice sets available from the Educational Supply Association



These two articles (the second appears next week) give details of some mathematical games which have been brought in this country. All those mentioned were inspected during 1975 and selected as useful for secondary or middle school children.

Mathematical games are an accepted activity in most schools. Mathematics clubs, but games must often be used as a classroom resource. This means that the material which games can provide is often already motivated. As it is not applied to the many pupils in the classroom, who might thereby get a new interest in mathematics lessons? Four reasons are often given.

Playing games can take a lot of time. This valid criticism should be compared with the mathematical progress which a pupil achieves after 30 minutes of games in the classroom. For example, with the game Vector Cricket (Taskmaster) each player may have used 80 pairs of coordinates, done addition, subtraction, multiplication and division, and calculated an average. Would these pupils have done more mathematics in 30 minutes with a workbook or textbook?

The reaction of some senior teachers is that "the classroom is a place for learning and not for games". This reminds me of the deputy head who called me to his room because "I had seen a boy at the back of my class reading a

newspaper" (in a current affairs lesson). Both newspapers and games can be useful learning resources.

Games nearly always involve some repetition, and teachers may be afraid that the less able pupils will have their sense of failure reinforced. This is unlikely because of the element of chance in many games, and because these games allow the pupil to play his turn in his own time and way.

The teacher has difficulty in discovering suitable games which are available. It is hoped that these two articles will help by selecting games in each of several mathematical categories. Just as a pack of 52 ordinary playing cards may be used in many different ways, the apparatus described here can also be used in many ways for a resourceful teacher. Therefore the categories are only a first guide for the reader.

Sets and attributes

With the game Get-set (Maths Learning Systems), two, three or four pupils will have a simple but effective game, based on their ability to place pictures or numbers in the correct sets. There are two versions included in the game, and for both the board is three intersecting circles. Each circle represents a set chosen from 10 possibilities (for example, people who are smiling in the pictures; numbers which are a multiple of 10; placed upside-down in the picture; or with the integers from one to 49, on them).

Each player in turn picks up a counter and has to place it on the correct part of the board. As the first player to complete a row of counters, players collect from the board counters which they place on the board. The first player to recognize correct intersections or unions of sets. When all the upside-down counters have been placed, the player who has collected most counters from the board is the winner.

This description illustrates the construction of many of the games which will be mentioned in this article. The manufacturer supplies apparatus (for example, simple counters, cards and a board) which is more robust than a teacher would make. This is used for one or more versions of a basic game which has been tested with children and the details probably modified until this successful game has evolved. The manufacturer provides a pamphlet which gives rules and instructions for the basic game(s), describes variations and development, and may offer educational notes for the teacher.

Invicta supply sets of card games, from which two packs are designed to give practice with sets and attributes. Each pack of cards, of average quality, slips into a cardholder box with rather brief suggestions for play printed on the outside. This brevity is a disadvantage, but it means that there is an extra sheet of paper to get lost. Each card of the first game, Epsilon, shows members of the sets of people, trees, buildings and vehicles. The second game, Cagion, is designed to link with work on Invicta attributes blocks; there are 60 cards with patterns and shapes in red, yellow and blue. The packs can be used for card games such as Snap and Memory. Families, and the manufacturer states that "many games can be devised by resourceful teachers and children".

Although it costs slightly more, the Mathmax pack (Thomas Hope) is of much higher quality. The cards, attractively printed in five colours, are enclosed in a plastic box. Each box also contains a well-written pamphlet with guide notes, the rules of six games for two or more players and illustrations for the teacher. For 15p extra, the player can buy a detailed 10-page booklet which explains how to use several packs in a classroom. Mathmax, with 52 cards and two games, is one of the best packs

available to provide practice in attributes and in arithmetic practice.

Dice

Some teachers prefer pupils to use numbers which are quieter, but dice are generally more accurate and come to rest more quickly. A great variety of dice is available.

The most unusual in shape are the multi-sided dice which are available in plastic, light or bladed from Arnold, or which can sometimes be seen in wood on an executive's desk. With careful dice the teacher must devote what size he wants, and what engraving on the sides.

E.S.A. supply a comprehensive selection of tough and accurate plastic dice. Similar to the traditional dice, from 0 to 10, six-sided dice, there are Number Dice which have a numeral on each face, one, two, three, four, five, six. Their Sum Dice have the six-sided numbers -2, -1, +2, +3, +4, +5 on the six faces. These dice can be used in pairs, to give practice in the multiplication tables from 0 to 12. Each card has a black multiplication table (e.g. 4 x 3) and a red division table (e.g. 12 ÷ 3). Printed on that, the correct answer is confirmed by turning over the card.

A rather different game which gives good practice in factors and multiples is the five-sided dice, the base-two die is printed 0, 0, 0, 1, 1, 1; base-three die, 0, 0, 1, 1, 2, 2; base-four die, 0, 1, 2, 3, blank, blank; base-five die, 0, 1, 2, 3, 4, blank, base-six die, 0, 1, 2, 3, 4, 5.

Two sets of these dice can be used for practice in simple arithmetic to the five bases, though some rule would have to be devised for throws which gave a blank face (obviously this is a nice illustration of the distinction between zero and the empty set). Another use for these would be to make a chance decision between several pathways or alternatives in a game.

The Number Dice Set (Arnold) is

supplied with teaching notes which show how to use them at various stages of arithmetic practice. The set contains five pairs of dice, coloured, one-centimetre, cubical dice. For simple sums and differences the pupil might start with the blue die (which has the numbers 7, 8, 9, 10, 11, 12 on the faces), the yellow die (which is printed 4, 5, 6, 7, 8, 9) and a red die (0, 1, 2, 3, 4, 5). The other two dice are white (4, 5, 6, 7, 8, 9) and green (1, 2, 3, 4, 5).

Board games for elementary arithmetic

Arithmetic practice can be enjoyed by using board games. One such game is the magic square problem, where the whole number up to nine, 16, or 25 have to be arranged so that each line of numbers has an equal sum. These problems are mathematically solved by some pupils using pen and paper, but for other pupils the paper contains a mass (and mess) of lines and numbers. For this second group of pupils you can buy the three attractive Magic Squares games (Taskmaster), which come complete with instructions. The pupil then has coloured plastic tablets, which he can move about inside trays as he attempts to solve the 3 x 3, 4 x 4 and 5 x 5 magic squares.

Cateona (Arnold) is a game for two players, which gives practice in the multiplication tables. The right board is a 10 by 10 grid for the multiplication tables, and the 10 counters are each printed with one of the products. Each player has to try to get a chain of his counters across the board. This winning play is reached by calculating products and possible factors for each group of counters. Complete instructions are provided which should satisfy any teacher. My only minor criticism is that the counters have not been printed boldly enough.

There is an excellent sequence of 20 Mathematical Games (Macmillan) designed for primary school. Some could be used with the younger children consisted in this article, but these few games the book is expensive. For the teacher, I think shows educational development through the sequence of games and the author's attention to detail. It is a superb game, which he is familiar with in a sequence suitable for classroom use.

Card games for elementary arithmetic

One advantage of card games is that they often allow more players than board games, and all the games described here can be played by up to six pupils. Quick Test (Arnold) is designed to give competitive practice with the pairs of numbers whose sum is 10. It is a card game, and contains four cards for each number from 0 to 10, two blanks for practice in addition and subtraction, and complete instructions for play.

A second Galt game of similar quality is "Turning the Tables". This has 156 cards, and provides a comprehensive practice in the multiplication tables from 0 to 12. Each card has a black multiplication table (e.g. 4 x 3) and a red division table (e.g. 12 ÷ 3). Printed on that, the correct answer is confirmed by turning over the card.

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Dr Peter G. Dean works at London University's Institute of Education.

Brunel's new language laboratory equation

By Ruth Rees

A recent study in the education department of Brunel University* suggests that the language laboratory could be a most valuable aid in teaching or learning of mathematics. Discussions with teachers indicate that in many schools the language laboratory is not fully used, so that access for mathematics should not present any major difficulties.

The Brunel study set out to monitor the routes taken by students to the language laboratory, and to see if they were given specially devised materials and asked to think their way through the items, doing whatever was necessary on the paper. It was emphasized that they had to think whatever was going on in their heads even if they felt confused or went blank.

Routes to solutions were recorded using a portable cassette recorder with built-in microphone. The language laboratory is an efficient with respect to time and space. For this second group of pupils you can buy the three attractive Magic Squares games (Taskmaster), which come complete with instructions. The pupil then has coloured plastic tablets, which he can move about inside trays as he attempts to solve the 3 x 3, 4 x 4 and 5 x 5 magic squares.

Occasional use of a language laboratory in mathematics teaching will detect students' difficulties at an early stage in the introduction of new ideas or help to consolidate previously taught.

A variety of items were given to students in further education, school or university. The following is a selection. Language laboratory recordings—The school pupils recorded were about 13 and from an above-average ability band in a comprehensive school, although not rigorously set for mathematics. The university students were on a first-year undergraduate building engineering course.

School pupils, boy: "If $1/x = 3$ then $x = 1/3$. Good. No 1. Must work out $1/x = 3$. No... can't work out... do this one—think... think—oh I don't know—leave this one—go back to this in a minute."

University student, girl: "513 ÷ 27 is... oh, how do you do it? By long division; can't quite remember. Do it generally. 7 into 513... oh, 17 times 27 into 513... 27 times 10, 270 x 2, 540 yeah. 27 x 20 is

... oh, 27 times... 23 point something. Girl: If $1/x = 3$ then x is, then x is... x is... 3, yes, because x would be $1/3$ would be? So x must be 3 . "513 ÷ 27 is, 27 into 51... Put 3 noughts after 513 to make some noughts down. 27 into 51... no, don't think it does... no... so that's um... 51... 11 into 7 is 4, (subtracts wrongly) 1, 27 won't go, put up 1, 11 x 6... means... (long pauses while working on the paper) ... um... I think the answer is 11.6. Not sure because it's a bit hard."

Boy: "If $1/x$ equals 3 then x is... (long pause) ... 4 times 3 is 12... one twelfth. No: 1 equals 3... would be one twelfth, equals 3... one twelfth."

University students: male (A level pure applied maths): "If $1/x = 4$ then x is: Multiply both sides by x , get 1 equals $3x/4$ now... 4 and divide both sides by 3 get x equals therefore $4/3$.

513 ÷ 27... long division or by looking at answers. 27 times 10 equals 270, 27 times 20 equals 540, 9 times 7 ends in 3, 63, 7 times 7 ends in 9. Therefore... answer 19. Tape recorded interview.—The students interviewed were day-release, first-year craft and technician students, age about 17 or 18 years.

Craft students (with CSE grades or below): Student 1: "If one $x =$ three quarters then x is... 3... (long pause)." Interviewer: "What are you thinking?"

Student 2: "Blank again." Interviewer: "Why blank?"

Student 3: "Never knew how to do equations. Just never sunk in..."

Student 4: "If $1/x = 3$ then x is... Interviewer: "What's the going through your mind?" Long pause

Student 5: "What are you thinking?" Interviewer: "Blank?"

Student 6: "Why? It would be helpful to know." Interviewer: "1... 3, one's into three..."

Student 7: "And x and 4 are both on the bottom. Is that what you're thinking?" Interviewer: "Yes."

Student 8: "Yes." Interviewer: "Student 1 (0 level maths grade B): "513 ÷ 27... I'd work that out later on."

Interviewer: "Because you think this item would involve you in a lot of thinking too?"

Student 9: "Not thinking. It's simple division. If I knew before—if I had come across it before and I knew, like, 27 was divisible into 5, number of times, I'd put it down immediately. But I don't know of come across three kind of figures very often so I have to work them out."



Can language laboratories be used for maths teaching as well?

Interviewer: "You wouldn't look at those numbers to see if you could simplify it in any way? You might not have to do long division if you spent a little time thinking about it. There may be a common factor there. However, time is racing on."

Interviewer: "Have you any ideas? What's going on in your mind?" Long pause.

Student 10 (CSE grade 2): "If $1/x = 4$ then x is... (long pause) ... 1. 'Something must be happening.' S: 'I am thinking that's one over x in the ratio 3:4 so x is going to be more than one so... Yes, I think x is 4 over 3."

Student 11: "Why would you say that?" Interviewer: "Well, what I did is cross multiply, 4 equals $3x$, x equals 4 over 3 taking 3 on the other side."

Several points of interest have emerged from study of the recordings. Considering the item $1/x = 4$, for example, it is clear that on the whole the sample of school pupils saw equivalent fractions, but there were heretic confused and showed little skill in finding x : solutions varied from those illustrated to include $1/12$, $1/12$, $1/12$, $1/12$.

The Brunel experiment indicates that it would be worth exploring the possibilities of the language laboratory for diagnostic work and teaching and learning mathematics in general. More than anything, we need to talk about mathematics: about the symbolism used, the money possible routes to a solution. Problem-solving is more than the application of one technique or box of tricks applied to a given situation, the elegance and effectiveness of the language of mathematics should be better appreciated.

The study, supervised by Professor W. D. Furness, is currently funded by a BP Fellowship. Ruth Rees is a BP Research Fellow working at Brunel University.

Genetics and software

by Celia M. Line

Chelsea Science Simulation Project: Linkover Unit on Genetic Mapping. By P. J. Murphy. Edward Arnold £3.75 a pack of teacher's guide and six copies of students' notes.

There are, it has been said, two basic theories in the science of biology: evolution theory and genetic theory. It is, perhaps, surprising, considering the increasing use of the computer in teaching, that it has not been applied before to genetics, which, as well as its central role in biology, has so many quantitative aspects.

The Chelsea Science Simulation Project Linkover Unit on genetic mapping should provide a valuable adjunct to genetics courses. It provides an attractive alternative to tedious and time-consuming laboratory exercises for those with access to a computer terminal and is so presented that it can be used by a teacher and students who have no knowledge of computing.

The programme emphasizes the fundamental genetic concepts of linkage and crossing over. Although

a brief introduction to these topics is included in the students' guide, it cannot be overemphasized that "Linkover" should be used only as an addition to a thorough grounding in the principles of Mendelian genetics, and not as an alternative. This point is forcibly made by the author in his introduction to the teacher's guide. This is clearly written and complements the well-presented students' notes, without unnecessary repetition.

By using the computer simulation, obtainable through the Chelsea Science Simulation Project, students can condense weeks of experimental work into three hours of computer time. He can carry out numerous three-factor crosses involving various combinations of 10 genes. The organism employed in the simulation is that of the fruit fly, *Drosophila*. The student designs appropriate crosses to assist him in ordering the genes and feels these into the computer. The computer prints out the phenotypes of 100 random progeny from each cross and the student applies his knowledge of statistical principles to construct a genetic map.

It is to be hoped that the two further simulations promised from Chelsea, on population genetics and evolution, will prove as useful.

Yemeni lifestyles

by David A. Alexander

Yemen and its People. Catholic Institute for International Relations, 41 Holland Park, London W11 3RP, £1.05 plus 20p pp.

Although British influence remained in the Federation of South Arabia and the Aden Protectorate until the People's Republic of South Yemen was established in 1967, remarkably little is known of the neighbouring Yemen Arab Republic.

This folder-pack of 14 interrelated pamphlets, references and information sheets, the result of development project work by CIIR since 1971, is a welcome addition to the literature for those engaged in Third World studies. Modestly, it aims "to introduce Yemen and its people and to stimulate interest among parish groups, community workers, students and teachers". Its strengths lie in its first-hand identification with both place and individual lifestyle.

There is ample scope for the enterprising classroom user, who might examine first, the Yemeni immigrant communities here in Britain—there are over 850 Yemenis living in Birmingham alone. The underlying reasons for this can be seen by examining the country which stretches from the potentially fertile Tihama plain along the Red Sea, through the currently most productive southern uplands around the capital of Sana'a, to the relatively unknown lands of the Empty Quarter. The accompanying map which shows patterns of relief, major settlements and communications, would win few cartographic awards.

Over 90 per cent of Yemen's population remain in rural communities and succeeding material examines one such community through an account of Mawza in the Tihama. Daily life is closely interrelated with climatic conditions, traditional architecture, landownership and social structure, Islam and limited socio-economic opportunity. Of the people themselves, one pamphlet describes the life of a Yemeni schoolgirl—she took under 15 per cent of the school-age population—another, that of a tenant farmer's wife, and yet another, the institution of marriage. All may be profitably contrasted with the life of a Yemeni schoolgirl. Since the Yemenis want especially to establish rural health facilities and recruit nurses, midwives and doctors, CIIR have concentrated their efforts in this sphere. Pamphlets outline mother and child health, together with the food and nutritional requirements for a balanced diet.

While known historically as a fortunate land, Yemen is a poor country, with over one million men—out of a population of approximately six million—obliged to find work abroad. In addition, exports of agricultural produce equal 10 per cent of total imports, themselves 50 per cent of foodstuffs. There are as yet no oil deposits to give Yemen the riches of its Saudi Arabian neighbour and raise it again to Arabia Felix.

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From an article in Bird Life on

Clues for outdoor sleuths

by Alison Ross

If man was being carefully scrutinized, without knowing anything about it, by a superior animal, how easy he would be in many states of so-called civilization to follow and study. His litter from food remains, from smoking, from drinking, from driving and even from his sexual pleasures, would frequently give away his presence or the fact that he had recently been present.

His footprints and tyreprints would show up clearly in some circumstances and give away his activities, even though he may have felt that no one could guess where he had been. Of course, the police are able, when necessary, to use all these means of locating anyone they wish to consult by following such clues. They also employ tracker-dogs to augment their own sense of scent and metal-detectors to help them in their arduous occupation of tracking.

Naturalists at various stages of observation-development have less to go on, for wild animals, like hunted men, are careful about their tracks. Their lives often depend on their ability to come and go secretly, but they, too, without realizing it, leave enough signs, or clues, behind them to enable

Some footprint trails by Alison Ross for her book *Tracking Animals* (Basil Blackwell, 1971). Above: fox. Top right: trails left in wet sand by (from left to right): man, woman, huge dog and child. Lower right (from top to bottom): cautious squirrel (crouches down half-way); field vole, field mouse.

us to discover plenty about their habits. This is a good thing, particularly in mammal study, for the creatures themselves are difficult to see. Although wild deer, foxes, rabbits, hares and voles may be out feeding during the day, they quickly move off if they hear or see people. The nocturnal animals, badgers, otters and dormice are even less easy to observe.

It is still possible to learn a great deal about animals' lives by looking out for signs and clues as to their presence and their occupations. Some are less tidy than others, foxes, for example, probably being high on the list of litter-leavers, and even the elusive mink gives itself away frequently by its habit of wholesale destruction of the series of cat-toe-like footprints.

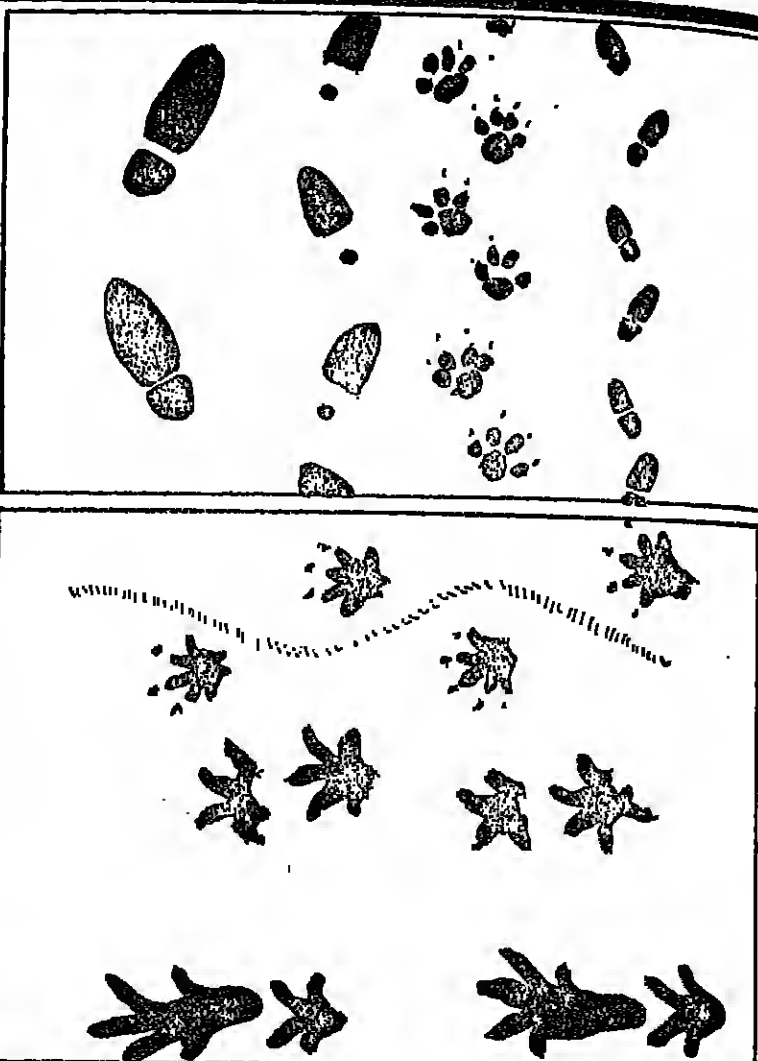
Other less tidy animals frequently leave gnawed canes, nuts, fungi, or chewed or incised tree bark behind them, as well as hairs from their coats. Most of all, without any doubt, is learnt from being able to distinguish the footprints.

Man, on the whole, except in the summer on the shore, wears shoes. So do horses and ponies which are also shod to protect their feet. But other animals and all birds leave distinctive footprints and trails.

Learning to recognize these can be the beginning of a lifetime interest in wildlife which can be carried on anywhere. Tracking by footprints depends on there being suitable surfaces available to register impressions. This need not only be confined to rural districts, as the mud left as puddles dry on hard surfaces records good impressions of light animals. So does some snow, of course, is excellent and winter is often the best season in which to start a course on tracking.

Sketches of solitary footprints, or patterns of trails where possible, can be kept as records of sightings of strange marks; even better are casts made of them by mixing plaster of Paris in clean water until it is smooth and the consistency of good cream and then pouring it gently into the footprint. It sets in 10 to 15 minutes and can be lifted out and taken home.

When the cast is dry it can be cleaned up and used to make a like footprint in modelling material, which in its turn can be mocked up to look as if it is in natural surroundings by the addition of a few light scatterings of surrounding soil, sand, dead leaves, etc.



Kits—bad and good

by Daniel China

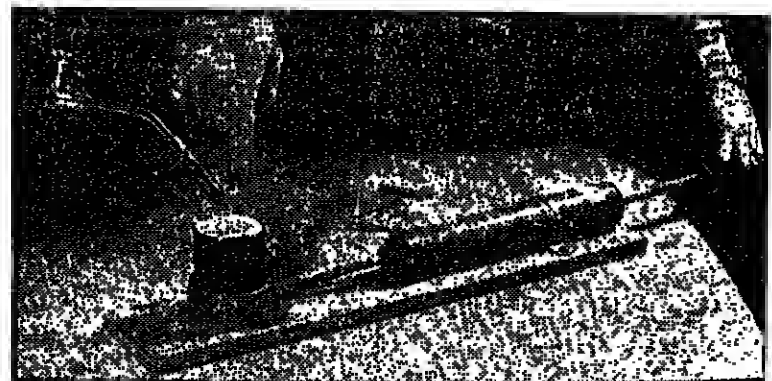
Macramé is not a particularly new craft, nor is a length of string a new craft material; however, put them together with a lot of packaging and three heads and you have a macramé kit for beginners, and that is now. But craft kits, like convenience foods, are a mixed blessing. Children can get involved with glasscraft ("decorative, profitable, creative"), castcraft, plasticraft, stonecraft, candlecraft, enamelcraft, hobbycraft, chesscraft, coppercraft ("creative, decorative, educational") to name but a few. Some of these activities, such as candlemaking and enamelling, are already well established in school, and these kits can be invaluable to teachers wishing to sample a new technique before introducing it into the classroom.

Of the kits seeking to introduce new materials and techniques into the hobbies/handicrafts market, many are concerned with the process of casting in one form or another. For instance, enameled sea-horses in clear plastic resin. One manufacturer has a resin which simulates metal. They also include ready-made moulds, so that if the kit is used correctly, the child can get an exact replica of the pegasus featured on the box lid.

This reduction of crafts into purely mechanical processes is one of the most disappointing aspects of some of the kits. If there is no scope to develop something new and exciting, it is unlikely to prove worthwhile. Another kit, dealing with etching on copper plate, supplies pictures of chubby little girls on equally chubby ponies to be copied on to the copper, thus reducing a potentially exciting medium to something only a little more complicated than using tracing paper. One sympathizes with the manufacturer who has to virtually guarantee an acceptable finished article in order to justify the existence of their products. Nevertheless, in making the process foolproof in some cases they have also made it pointless.

However, there are a great number of other new developments in the rapidly expanding hobby/handicrafts market of which I will only mention two because they both seem to have something valuable to offer teachers.

Brickmaster is a complete miniature building system, starting with



Vacuum assisted lost wax equipment, from Barrett's of Croydon.

trays of brick moulds for making the bricks, or brick, finishing with window and door frames to complete the building. Balsa wood joists are used for completing the ceilings and roofs.

In the middle school this could provide the raw materials for some really exciting project work involving a variety of manipulative and intellectual skills, from designing, planning and ordering materials for the proposed structure, to decorating, furnishing and populating the finished building.

Lost wax casting is again not a new process; it has been used by sculptors and jewellers for at least 5,000 years. On a large scale it is technically complicated. However, for small items, such as rings and other pieces of jewellery, it is an interesting and not too difficult process to master in school. The desired shape is first

modelled in wax and covered in a heat-resistant plaster. This is then heated steadily in a small kiln, until all the wax has evaporated, leaving a negative mould into which is poured the molten metal. Barrett's, a small Croydon firm, specializing in vacuum assisted lost wax casting equipment, sell a complete range of equipment designed with schools in mind. It is on the whole expensive to buy and use. Even with silver the running costs are low because relatively small amounts are used. The other consumable materials, wax and plaster, are both cheap. The potential of *cire perdue* work as a new creative medium in both art and craft departments has yet to be realized. Barrett's (290 Lower Addiscombe Road, Croydon) seem to have made this a viable proposition.

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TALKBACK

One school's English teachers
discuss their
policy with other departments

Talking to each other

This is an extract from a tape of a staff meeting held at a large comprehensive school in an inner city area. The school has 900 pupils and a staff of around 60. The English department had invited the rest of the staff to question it about the philosophy, policy and practice of English teaching at the school, and to raise any questions about the way in which the subject impinged on their own.

Peter (history teacher): Could you make a statement outlining what you consider to be the role of the English department in the school, and how you're trying to fulfil this role?

Michael (head of English): Well I would certainly attempt to do that. The English department have, for some time, been growing closer together, and we meet every three weeks and we're getting to the point where we seem to be united on our ideas of what we're trying to do, and how we're trying to do it.

So I suppose I have got to your point I can state it in broadly educational terms, and you may think I'm right, but your practice as surviving teachers in the classroom doesn't match up to it, and of course it's all right for him, he may practice what he preaches, we can't say that for all of them. This is another thing I've heard said, and I'm not sure that I do practise what I preach because, for example, I preach that I don't believe in causing children, and yet as probably most of you know, I've thumped a good few in my time in order to get the kind of standards of behaviour and mutual respect that some teachers require out of theirs. Now that might be a lack of cohesion between theory and practice.

I want myself, and I think other people want as well they could go on and make statements in that way, but I want other people to talk as well as just the children in the practice in three kinds of writing. I'm using the London Institute of Education's categories.

In expressive writing I want them to be able to say honestly and clearly and fluently things which have happened to them, what their opinions on things are, in a kind of personal way and you would with small group discussion. I want them to be able to sift, analyse, research, think, and the kind of things that I think most of us in our subjects want them to be able to do, and I'm calling that transactional writing.

I want them to be able to read something, relate to it, understand it, talk about it, so I want critical writing. I want them to be able to speculate, discuss and argue in writing, and that's difficult as well, and I would put all those, the critical and the analytical and the formal, all together in one category and call it transactional.

I also want them to be able to be fluent in, and to have practised, before forms of writing that I call imaginative writing or poetic writing, where they're using story and poetry and play forms to create situations which they are explaining terms with them. I want them to be fluent and confident so I want to do a bit of oral work.

I certainly want them to be able to spell and punctuate as perfectly as I can get them to be able to do, because those are still two vitally important things. I find the way to getting a child to want to spell and punctuate is by creating a sense of a wider audience, creating a pride in his own work and creating a feeling of achievement and a desire to get the thing better, and that generally comes from writing a great story or a



A different staff meeting—this time at a Hillington secondary school.

great poem, so I can say "That's really marvellous, I'd like that in the typed out. I don't think the secretary could read it the way you've written it though, can we have a fair copy? If you set it out like this, it will look more like a book", and so on.

So I think, in broad general terms, I want to do all those splendid things. Finding the methods of doing it, as a department and as individuals, are things that we're all trying to do. Have I come near what you wanted?

Peter: It's a starting point, yes. I had hoped for something a little bit more specific. For example, one of two people have said that one of the problems we have with children is that they have a very narrow experience of life, and someone made the point that if you're talking in terms of creative imagination, what sort of experiences are they drawing from. Now what does the English department do to widen that experience?

Lorna (English remedial teacher): I don't think their experience is necessarily narrow. You don't necessarily broaden experience, make it richer by broadening it, but by deepening it, seeing more in it, rather than showing new things in.

Dennis (geography/social studies teacher): I think that when they come they are very small children and like small children, they need to be played with, they need to have stories, fairy stories, they need a bit of fantasy, and they need a bit of play.

This is a whole dimension which we were familiar with in our own childhood, and which many of them are not familiar with, they're not often played with by adults. If you can in a lesson occasionally have a bit of playing with them, particularly the second year, it's amazing the response you get back. I find, particularly in the younger ones, that when you start talking to them about building on their own experience, a little bit of a wall goes

up. You're trying a bit too close into things that are quite often painful, and when you say "Let's have a look at something exotic for a change", they say "Yes, please", so I can see the point you're making.

Margaret (geography teacher): But isn't the fantasy building up on something that they've got already? Barry (English teacher): When people talk as much as we've been talking you get a sense of reaction, of something out there, which people go out and find and walk through and leave behind them. Now as you know, on a moment's thought this isn't true, it doesn't even fit a commonsense description. It's an important point, it's not Barry who said something about experience is nothing until it has been assimilated into yourself by thinking about it, using it.

The point is that they have a certain range of abilities, knowledge, skills, ignorance and so on. Now as soon as you start reading the stuff, they will be interpreted differently by all of them, and if you get them to think consciously about something, they will have to draw on experience in a sense—do you see what I'm getting at?

I would be absolutely meaning-just if they had nothing at all, and when we talk about impoverished experience we tend to think that the child is coming along to this school in this area with a small package of it and is only going to get a certain amount of the story. That isn't so, he'll get everything he can, and you don't really know what he's getting out of it.

Dennis's question invites one to think rapidly "My goodness, what villages have I taken them to see, what films have I taken them to see, what exciting old muckers at work have I taken them to see" and the answer is obviously very little, and yet I don't feel that because the answer is very little that one is not, necessarily, giving them much at all.

Most of the experiences that exist in literature have already been experienced in some sense by a child of five. They've already known terms, they've already known language, they've already known deprivation, they've already known jealousy, and so on, whatever the level of literacy is available and present and known to a child of almost any age, as Barry has implied. There is nothing strange about the most serious things in literature to a very small child, provided you can find his terms.

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So there is both a development of more intensity and a development of recognition and sharing, going on in English teaching, in English work. Now it seems to me that the problems come, and the difficulties come, because of the gaps between what the children actually are when they're there in front of you, when they come into

school, and what you are. Many of the objections to our English department are objections to the temperament and style of the people rather than to their theory.

Now for example, Ann has spoken of the childlike simplicities of these 11-year-olds coming into the school, and when you've realized it, it's obvious and it's vital to work through those childlike simplicities. What the English teachers tend to be, however, hard they try not to be, is highly sophisticated, highly analytical, highly aware of more different levels from the children's levels, also subtly analytical in ways that may be positively ruinous to the children. I think Ann also said that sometimes children don't want you to probe too far into their background because they're a bit afraid of what you might see. The truth is that English teachers on the whole actually want to probe and feel they should, and that is where many of the difficulties come.

I mean that working in terms of literature, working in terms of experience and individual sensitivities, makes you want to become more aware of how other people work, more analytical of yourself, and you want other people to be the same. So there may be a strong tendency for English teachers to want children to know *consciousness* what is going on in their minds, what their reactions are like to others, when in fact the children may be still needing to digest this in terms of their private selves through fairy stories, through fables, through simple rules, through all sorts of things, but not to have feelings analysed, not to have them discussed, because the analysis and discussion are sophisticated processes, satisfying in the English teacher but not right for the child.

Our English department, like most English departments, is composed of analytical, politically conscious, driving, driven people, who possibly want and hope that the children will be free, self-controlled, ready to choose, ready to make decisions, ready to behave in various open ways, ready to behave in various sympathetic ways when in fact, for a fair part of the time, the children need to be simple, and sometimes private, and to be working through something more specific, more limited, than what the teacher longs for and desires.

I feel that one of the main problems is choosing your time and adapting, trying to do too much, too openly, too quickly, with a newly arrived whole class, when some of them may not be ready at all. I think it is really a matter of gaps between time and place, child and adult, adult's temperament and style and child's temperament and style.

This extract is taken from the Council for Educational Technology's recently published evaluation case study, *The Staff Meeting*. In selecting the material for this study, the council were not concerned with the subject under discussion, but with the technique of operating staff meetings. The case study does not include any expression of support or opposition to the educational philosophy expounded by the participants; it aims to promote discussion about the staff conference method generally, and its contribution to a systematic approach to course construction.

● The Aquarius programme mentioned in Malcolm Gorrie's article on rock theatre in Ryhope School, Sunderland (Talkback, November 34) will now be shown on December 20 (December 23 in Leyland).

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The person appointed will be expected to support the officer in charge of the unit and to deputise for him during his absence, as well as to act as teacher of a team of 3 teachers and 4 instructors who will have responsibility for the formal educational programme.

Experience in remedial work, guidance and counselling will be an advantage.

SALARY £4,419-£5,243 according to qualifications and experience. If necessary a house will be available outside the school grounds for which a reasonable charge will be made.

2) CARE STAFF (13 posts)

These members of staff will form part of 3 teams and will have the main responsibility for the primary care of the children.

Three staff will be selected for the appointment as Senior Assistants and will assume a leadership role within the teams.

SALARY £1,866-£2,102 according to qualifications and experience. Senior Assistants will receive an additional allowance of £185 per annum.

Applicants should preferably have qualifications in Residential Child Care and be qualified to work with handicapped children.

3) SENIOR SOCIAL WORKER (one post)

The Senior Social Worker will have the task of monitoring and helping with case management decisions and the statutory social work agencies. The post will involve a considerable amount of liaison work with local authority and other social work and community agencies and possibly with the parents of the children.

It is essential that the person appointed has full social work qualifications and preferably a minimum of two years' experience as a field social worker.

SALARY £3,339-£4,267 according to experience.

4) TEACHERS (3 posts)

Applicants must be qualified to teach one or more of the following: English, Drama, Art, Physical Education, General Subjects, Remedial Education.

One teacher will be selected for appointment as Senior Assistant.

SALARY £3,466-£5,310 according to qualifications and experience. The Senior Assistant will receive an additional allowance of £185 per annum.

5) INSTRUCTORS (4 posts)

Applicants should preferably have a recognised qualification in one of the following: Art, Drama, Music, Physical Education, General Subjects, Remedial Education.

Applicants with lower qualifications but suitable experience may be considered.

Applicants should be prepared to work in a team and to be available for training and to be available for training and to be available for training.

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Assessment Centres

BEDFORDSHIRE

EDUCATION SERVICE

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John W. Hill

ROYAL COUNTY OF BERKSHIRE

Education Department
Child Guidance ServicePRINCIPAL
PSYCHIATRIC
SOCIAL WORKER

Salary: Senior Officers Grade 1, £4,239-£4,545 p.a.

Required to lead a team of 15 full-time and part-time Psychiatric Social Workers employed in the Child Guidance Service in the County and based at Clinics in Newbury, Reading, Maidenhead, Slough and Bracknell. The work involves close collaboration with Psychiatrists and Educational Psychologists.

Further particulars and forms of application from Director of Education (SPM), Kenner House, 80/82 Kings Church, Reading RG1 3JL to whom they should be returned by December 22.

ilead
EDUCATION AUTHORITY

Schools' Psychological Service

Educational
Psychologist

Salary: £7,292-£8,093

(including £416 London Weighting Allowance)

Required to work in the South-East London Area. Applicants should have an honours degree in psychology, teaching experience, a postgraduate training in educational psychology, and experience of local authority work.

Successful applicants will be required to assist with the work of the Schools' Psychological Service generally. This offers opportunities for experience in ordinary and special day and boarding schools as well as community homes.

Details and application forms from the Education Officer (ED/ESH 24/1), Addington Street Annex, The Office 1101, London SE1 7PB (01-633 6175). Forms to be returned by 2 January 1976.

London Borough of Enfield

EDUCATIONAL
PSYCHOLOGIST

£3,486 to £5,931

Applications are invited for the above post of the Child Guidance Centre and Office. Candidates should be available to take up their duties 1st successful candidate on Monday January, 1976, and September, 1976.

Applications should have an Honours Degree in Psychology, post graduate training in Educational Psychology, Clinical Practice and Teaching experience in this country.

Commencing salary will be according to age. Essential user car allowance is payable and an assisted car purchase scheme is in operation. Mortgage facilities, 100 per cent removal expenses, generous assistance towards relocation costs, temporary housing accommodation up to two years, £10,000 lodging allowance (up to four months) in certain cases.

Further particulars and application forms may be obtained from the Chief Education Officer, P.O. Box 68, Civic Centre, Silver Street, Enfield, EN1 3XQ (Telephone: 01-365 8585) to be returned by 10th December, 1975. Please quote ref.: OGD/620.

Sisters of La Sagesse

SCHOOL AND RESIDENTIAL
CENTRE, SLIGO

Mental Handicap Services

PSYCHOLOGIST or
SENIOR PSYCHOLOGIST

Applications are invited for the above post. The person appointed will be the first full-time Psychologist in an extensive and developing service for mentally handicapped children and adults in the North-West. The Psychologist will work with members of other professions in developing, implementing and evaluating educational and training programmes. Initiative will be welcome.

Candidates should have an Honours Degree or Postgraduate University Diploma in Psychology. Experience in Mental Handicap or in a related field would be an advantage.

Excellent conditions of service are offered; salary related to qualifications and experience. Applications in writing to Reverend Mother, Sisters of La Sagesse, Crag House, Sligo.

APPOINTMENTS WANTED
continued

EXPERIENCED qualified teacher with 15 years' experience in primary schools, seeking a post in a primary school. Please apply to Mr. J. H. Smith, 123 High Street, London W1A 1AA.

EXPERIENCED teacher with 10 years' experience in secondary schools, seeking a post in a secondary school. Please apply to Mr. J. H. Smith, 123 High Street, London W1A 1AA.

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EDUCATIONAL
PSYCHOLOGIST

Peterborough (Post S15)

This appointment offers an opportunity to work in an expanding service where encouragement is given to develop specific interests and ideas. Applicants should possess an Honours Degree in Psychology, teaching experience, and postgraduate training in Educational Psychology. Applications will be considered from candidates who have yet to complete post-graduate training in educational psychology but are otherwise suitably qualified.

Salary within Southbury Scale—Points 6.12-22 (£3,225-£4,059-£5,670) according to qualifications and experience. Removal and Disturbance Allowances applicable, housing accommodation may be available if required.

Further details and an application form may be obtained from the Chief Education Officer, Shire Hall, Cambridge, CB3 0AP, to whom completed forms must be returned as soon as possible.

CAMBRIDGESHIRE
COUNTY COUNCIL

LONDON

MODERN POLYTECHNIC
H. J. HENRY 1981
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